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TENTH BIENNIAL REPORT

BEING THE

THIRTY-FIFTH AND THIRTY-SIXTH
ANNUAL REPORTS

OF THE

Kansas.

STATE BOARD OF HEALTH

OF THE

STATE OF KANSAS



JUNE 30, 1918, to JULY 1, 1920

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Tenth Biennial Report of the Kansas State Board of Health.

*To the Governor of Kansas and Members of the State Board of Health—
Greeting:*

During the fiscal year of 1918 and 1919 events have occurred of such an unprecedented character as to render this year noteworthy in the health annals of the state. A malignant epidemic of influenza swept the country and the state in three succeeding waves, accompanied by the highest morbidity and mortality that this country has ever seen, striking terror to the hearts of the people and rendering futile, in a large degree, efforts of health officers to stay its progress or to mitigate its malignant character.

A mere recital of the unprecedented number of cases of sickness or the huge total of deaths due to the epidemic and its complications but faintly pictures the apprehension and anxiety of the people, the almost total suspension of social activities, the closure of schools and churches and all public places of assemblage, the stagnation of business, and the utter confusion and chaos of the whole social fabric of the country, entailing enormous economic losses which accompanied this unprecedented and malignant epidemic.

The first wave of the epidemic occurred in the early spring of 1918, although at the time it was generally unrecognized. The disease was comparatively mild in character and was unattended with the frightful mortality which characterized the second and third waves.

The second wave apparently started in the United States army training camps in Massachusetts in August, rapidly spread over the country, moving westward, appearing in Camp Funston in this state in the latter part of September, from which focal point it spread throughout the state, attended by a high rate of mortality.

The third wave occurred in the late winter and early spring of 1920, again spreading rapidly over the state, but, on the whole, milder in character and being attended by a lower rate of morbidity and mortality, except in a few localities, where the reverse seemed to be true. This was noticeably true in the following counties: Edwards, Pratt, Kingman and Rawlins.

The history of former pandemics of influenza would seem to indicate that this country will continue to suffer from mild outbreaks or sporadic cases for a number of years to come, although no overwhelming epidemic such as characterized the second and third waves need be looked for.

For a detailed report and summary of cases and fatalities the reader is referred to the division reports on communicable diseases and vital statistics.

The lesson that perhaps can be most profitably drawn from the above recital of events is that the state should be prepared to meet such unusual outbreaks of disease in the future, for we found ourselves wholly unprepared to cope with the disease, having no funds at our disposal for emergency purposes, and had it not been for aid received from the Federal government the stricken communities of the state that were without medical or nursing services could not have been rendered aid.

The whole situation was further complicated by the fact that several thousand Kansas physicians were absent serving their country in the World War, which was also true of nurses, so that the shortage of medical and nursing services which usually accompanies a widespread epidemic was greatly accentuated. The special legislature of 1920 appropriated an emergency fund of \$25,000, which was not available until the third wave of the epidemic had almost spent its force. Yet out of it was provided a number of medical men and nurses to care for the more sorely stricken communities that were without sufficient medical and nursing services.

The State Board of Health should be provided with an emergency appropriation of not less than \$25,000 in order that they may expeditiously and efficiently meet similar conditions should they arise.

GENERAL.

Aside from the great epidemic of influenza, the state of health of the people of Kansas has not suffered from the presence of any unusual communicable disease during the biennium. Indeed, a study of the death rates during this period, excluding the deaths from influenza and its complications, reveals an unusually low death rate, particularly deaths from communicable disease.

The singular phenomenon of a marked reduction in the incidence and mortality of all classes of communicable disease following the great epidemic was observed throughout the United States as well as in Kansas.

INFLUENCE OF THE WAR ON HEALTH ACTIVITIES.

In analyzing the influence that the war has had upon health activities in the state it is perfectly clear that while there have been large losses, yet there have been compensating gains. Indeed, the losses attributed to the war were purely temporary in character, while the gains have been all more or less permanent. Among the losses as the result of the war might be enumerated:

First, the loss of personnel from the working force of the department. The Division of Water and Sewage was entirely disrupted. The chief engineer and his two assistants enlisted in the war, as did also the director of the Water and Sewage Laboratory and his chemist. These resignations were replaced only in part, so that the work of the Division of Water and Sewage suffered during the entire period of the war.

The state registrar, chief of the Division of Vital Statistics, enlisted, the executive officer acting as state registrar during his absence.

Many of our local health officers throughout the state enlisted in the service, their positions in a few instances unsupplied, and in other in-

stances filled by men unfamiliar with the work, and thus the local health work suffered by reason of the war.

In many instances, due to overwork, the physicians remaining in practice during the absence of their colleagues grew neglectful in their reporting of diseases and births, and thus constant supervision and stimulation along the lines of reporting was required during this period.

However, when we come to consider the gains as a result of the war, they so far outbalance the losses as to make them insignificant in comparison.

First might be mentioned the exaltation of and the forward movement in preventive medicine, which occupies a place in the estimation of the public that it never had before.

Second might be mentioned the valuable records as a result of the examination of soldiers for service, for we have now, for the first time in the history of the country, actual data as to the physical condition of the young men of the country between the ages of twenty-one and thirty-one.

Third. Extensive postgraduate work required of the doctors by reason of the army medical training in instruction camps.

Fourth. The inauguration of the war on venereal disease, which would probably not have been possible in another generation had it not been for the revelations of the war and the necessity for conserving our defensive man power.

Fifth. The hastening of the adoption of national prohibition, which in its final analysis must be considered a great public-health measure; and

Finally. The development and expansion of our public-health laboratories required to meet the increasing demand for laboratory work, the result, in part, of the impetus war activities gave to modern methods in curative and preventive medicine.

DIVISION OF COMMUNICABLE DISEASES AND SANITATION.

As stated in the opening paragraph of this report, the outstanding event relating to the work of this division during the biennium is the unprecedented epidemic of influenza. Aside from the huge morbidity and mortality as the result of this widespread disease, no unusual conditions have existed.

One of the reasons why the annual fatalities from tuberculosis excite no special comment is because it is not unusual. Yet the annual deaths of approximately one thousand Kansas citizens from this preventable disease should excite our interest and quicken us to renewed activity in providing ways and means for minimizing its continuous spread and its baneful effects. This division should be provided with at least two highly trained tuberculosis nurses, as abundant opportunities exist among the approximately six thousand living cases of tuberculosis to so instruct, educate and help these people as to greatly minimize the danger to local communities. Then, too, the State Tuberculosis Sanatorium should be enlarged to take care of those who are afflicted and are anxious to secure treatment, to the end that their chances for recovery may not be endangered by long periods of waiting.

But what is of even more importance from the standpoint of the public health, there should be either a state institution of such proportions as may receive and take care of advanced cases of tuberculosis which are not admitted into the State Sanatorium, or that each county should be required to provide a place for advanced cases, where they may be humanely cared for and yet no longer endanger their families or the public.

A detailed report of the work of this division will be given by the chief of the division.

DIVISION OF WATER AND SEWAGE.

The work of this division was greatly hindered and retarded by the chief engineer and his two assistants, together with part of the personnel of the Water and Sewage Laboratories, enlisting their services in the World War. Then, too, the high cost of material and construction work has greatly retarded public improvements, such as water and sewer extensions or the building of new plants in the smaller communities, but at this time the work is again going forward, and able personnel and local communities are pushing work that for several years was sorely neglected.

The most difficult problem confronting this division is the danger of the pollution of the natural waters of the state by increasing development and extension of the oil territories in central and southern Kansas. The newly developing fields in Marion and Chase counties, which are on the water shed of the Cottonwood and Neosho rivers, are a menace to the water supplies of the numerous and populous cities situated on the Neosho river. There is urgent need for additional legislation, by which close supervision of oil wells may be brought about, requiring, in so far as it is physically possible, the shutting off of all salt-water wastes from the wells. If this is not done a similar condition may result on the Neosho river as has occurred on the Walnut river, on whose drainage area are the great Butler county oil fields. The water supplies of Winfield, Augusta, Douglas and El Dorado have been ruined by oil wastes, occasioning an acute water famine for domestic purposes and contributing to the health hazard of the use of grossly polluted waters, and destroying or making unfit for stock purposes a hitherto wholesome water, killing all the fish in the streams and causing great danger to water-supply fixtures and plumbing.

The incoming legislature is urged to pass some adequate legislation which may protect the cities on the Neosho and Verdigris rivers.

A detailed report of this division will be given by the chief engineer.

DIVISION OF VITAL STATISTICS.

During the period of the war the chief of this division, the state registrar, was in the service overseas, the executive officer acting as state registrar. The phenomenon of greatly reduced number of marriages during the war, the fees from which finance this division, necessitated the last legislature making an additional appropriation of \$2,000 a year to continue the work. The number of marriages has scarcely yet returned

to normal, or, at all events, is not sufficient to provide adequate funds for financing the work of the division.

It is respectfully recommended to the legislature that they provide for an increase of the central marriage-license fees from fifty cents to seventy-five cents. This will be no special burden upon those who contemplate matrimony, but the slight increase will adequately finance the work of the division.

A detailed report of the division will be given by the state registrar.

DIVISION OF FOODS AND DRUGS.

The work of this division has gone forward in its usual efficient manner. No unusual events have occurred which are worthy of notice. For the past few years intensive egg campaigns and milk campaigns have been put on by this division, which have resulted in very noticeably increasing the quality of the eggs and milk marketed in this state.

The assistant chief food and drug inspector will give a detailed report of the work of this division.

DIVISION OF CHILD HYGIENE.

The work of this division has gone forward in a highly satisfactory manner during the biennium. The result of the examination of the young men of the country for service in the World War has shown the transcending importance of the conservation of the "man power" of the nation. David Lloyd George, the great premier of the British empire, has well said that you cannot make an A-1 nation out of a 3-C population, and he further declares that not only was the strength of the nation conditioned upon the health of the people, but that ultimately the success of the trying period of reconstruction is likewise conditioned upon the general health and welfare of the people. It must be axiomatic that the healthy development of the human resources of the nation is the one great fundamental upon which our nation's existence depends and the security of the nation is assured. This can best be accomplished by the wise training and health supervision of the growing child.

Dr. Eugene R. Kelley, health commissioner of Massachusetts, has expressed the important work of child hygiene so well that it is worthy of quotation:

"In general it may be said that the greatest instrument in our hands for child conservation is instruction—personal contact rather than long-range instruction; lessons by demonstration rather than by precept or pamphlet; teaching the potential and prospective, as well as the actual and perplexed, mother as to the "what and why" of infant and child hygiene, given her in her own home or at convenient near-by centers in company with neighboring mothers, given her on a plane of equality and friendship by one who has her welfare at heart. This type of information in "mother craft" saves lives, and this type of practical hygiene can best be imparted by the trained child-welfare or public-health nurse."

A considerable increase in the means for conducting this important division should be made available by the next legislature.

A detailed report of this division will be given by the chief.

DIVISION OF VENEREAL DISEASE.

As formerly indicated, one of the most important gains of the World War was the well-planned and executed campaign against the spread of venereal disease. Inaugurated in the first instance as a measure to preserve the "man power" for war purposes, it has been continued during peace times because of the recognition that the widespread prevalence of venereal disease has attained such magnitude as to make it a race peril; for those who claim to know, and ought to know, tell us that gonorrhœa is more widely prevalent than any other communicable disease, measles alone excepted, and that from five to ten per cent of the people as a whole are syphilized.

These conditions being true, the work of venereal-disease control by the suppression of prostitution and other similar forms of vice, the establishment of clinics for the treatment of the disease, and the widespread and popular education of the people, particularly the on-coming generation, should be vigorously carried forward. This plan has been and will continue to be followed by this division.

The chief of this division will give a detailed report of the activities during the past biennium.

DIVISION OF PUBLIC-HEALTH EDUCATION.

The work of this division has continued in the usual manner through the use of our monthly publication, the *BULLETIN*, special bulletins treating special subjects, illustrated lectures, the stereoptic loan library, moving-picture films, etc.

Fundamentally, progress in public-health work must rest upon the education of the people to the end that new health habits may be formed to supplant the old and dangerous habits.

PUBLIC-HEALTH LABORATORIES.

One of the other great gains from the World War mentioned hitherto is the part played in and the importance of laboratory facilities for the diagnosing of disease and the tracing of sources of infection. The modern physician no longer relies entirely and finally upon his judgment in the diagnosis of disease where laboratory facilities are available and applicable.

For many years the department has labored under the handicap of insufficient laboratory facilities, until finally the demand for improvement along these lines was so insistent and so urgent that the State Board of Health appointed a committee on laboratory reorganization, for the purpose of consolidating the diagnostic and Wassermann laboratories at such place and under such conditions as would best serve the purpose of the Board and the physicians of the state. Fortunately, the committee was greatly aided in their investigation through the courtesy of the International Health Board and the Rockefeller Foundation, who assigned for the purpose Col. F. M. Russell, of the United States army, probably the country's greatest expert in laboratory organization.

Colonel Russell came to Kansas and made an exhaustive study of the whole situation and recommended that the united laboratories should be

situated at the headquarters of the State Board of Health at Topeka, and recommended detailed plans for an entire reorganization and equipment. These plans met the approval of the State Board of Health, but they were unable to be put into execution by reason of lack of funds, whereupon the International Health Board agreed to provide the salary for a director of laboratories until the legislature would meet, or until the first of July, 1921, and part of the salary of an assistant, under the title of bacteriologist.

Accordingly, these plans were put into execution. No rooms being available in the statehouse and no funds available for rent, this department made arrangement with Washburn College, whereby suitable rooms were provided for the laboratories free of cost.

The newly equipped laboratories are probably the most complete of any in the West, and will serve the people and the physicians of the state in a highly efficient and satisfactory manner.

It is urgently recommended that the legislature provide ample means for carrying on this work which has been so auspiciously begun.

PUBLIC-HEALTH NURSING IN KANSAS.

The State Tuberculosis Association maintains four public-health nurses in the field, who work in pairs, making tuberculosis surveys in elected counties. Suspected cases are assembled for diagnostic clinics. Instruction is given to active and suspected cases. Preventive propaganda is spread in these counties and positive health instruction given on all occasions.

These nurses also organized the Christmas seal campaign and assisted in the flu epidemic.

The southwestern division of the American Red Cross maintains a staff of four supervising nurses and twenty-seven public-health nurses, of whom two are school nurses, twenty-four are county nurses, and one is a visiting nurse.

In addition to the tuberculosis and Red Cross nurses, twenty-six county and city and eighteen school public-health nurses are maintained by the communities in which they work.

The American Red Cross has also given the services of a considerable number of teachers of home health and hygiene courses.

The county and school nurses have examined thousands of school children for height, weight and defects. The county and city nurses have conducted health conferences for mothers of preschool children and expectant mothers, also organized clinics for crippled children, dental work, etc. Both county and teaching nurses have conducted Little Mothers' leagues and given courses in teachers' institutes.

All have assisted in suppression of epidemics and in organizing the health forces of their communities. The work of the public-health nurse has come to be recognized as fundamental to any health program and to any attempt to raise the general health average of state or community.

Kansas communities are responding to the present forceful demonstration of this fact by asking for more public-health nurses than can be

supplied. The American Red Cross is planning to put twenty more nurses in the field, and still many applications will remain unfilled.

It is only a question of a short time until every county, every city and every school will be equipped with public-health nurses. The question of centralization and standardization of the direction of this public service becomes a pressing problem. A division of public-health nursing would harmonize the work of the various groups of nurses, avoid duplication and make for efficiency.

It is quite as necessary that the work of the public-health nurses should center in the State Board of Health as that health officers should be amenable to the State Board of Health. Indeed, the work of the public-health nurse and the health officer are inseparable. For this reason, if no other, both should report to the same agency.

In order to meet the rapidly increasing demand for public-health nurses, Kansas should maintain a post graduate school for the training of public-health nurses. In this way the urgent need would be met, nurses would be instructed to meet the conditions of their particular field, and an important vocational opportunity be extended to the girls of our own state.

Respectfully submitted.

S. J. CRUMBINE, M. D.,

Secretary and Executive Officer.

FIRST QUARTERLY MEETING, 1918.

Held in the City of Lansing, September 25, 1918.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

GENERAL. The work of the various divisions of the State Board of Health is proceeding in a satisfactory manner. Nothing unusual has occurred since the annual meeting that would be worthy of special note. We are glad to report that no extensive epidemics have occurred, that there has been less typhoid fever than a year ago during the same time, and that the general health conditions are believed to be more satisfactory, as a whole, than at any time in the history of the state.

There seems to be a small black cloud on the horizon which threatens our health conditions, as indicated by the following telegram received from the Surgeon General's Office of the United States Public Health Service:

WASHINGTON, D. C., Sept. 18, 1918.

Crumbine, State Health Officer, Topeka, Kan.:

In view of importance outbreaks influenza will have on war production, request you wire Bureau Public Health Service immediately information concerning influenza outbreaks in your state. Appreciate your keeping bureau constantly advised influenza situation.

BLUE.

In reply the following letter of inquiry was sent to the Surgeon General:

SEPTEMBER 19, 1918.

Surgeon General, U. S. P. H. S., Washington, D. C.:

SIR—Replying to your telegram of September 18 concerning outbreaks of influenza, will say that we will be glad to comply with your request in so far as possible.

However, the situation is so confused as to the character of this so-called influenza, now said to be epidemic in Boston, that it would seem to me exceedingly difficult to secure authentic reports on the prevalence of this disease, except, perhaps, in cases of widespread epidemics.

Both the average physician and layman are inclined to call any acute coryza as "influenza" or "grippe," so that compulsory reports on this disease would be, in all probability, very inaccurate.

Can your bureau furnish us with authentic information concerning the symptomatology of the present so-called influenza as epidemic in Boston? Has the bacteriology of this epidemic been definitely worked out?

Respectfully,

S. J. CRUMBINE, M. D., *Secretary.*

In the daily press of September 21 the New York city department of health announced the discovery of an organism of the so-called "Spanish influenza." It is fervently hoped that our military camps may escape infection from this highly contagious disease.

For the past year this department has been convinced that public health interests in the two Kansas Cities and Rosedale could best be served by the creation of a metropolitan area in charge of a well-trained

health officer of the United States Public Health Service. This conviction finally resulted in a determined effort to persuade the three cities in question to join in a request to Surgeon General Blue for the creation of a metropolitan area. Early in July our efforts were successful, and the following letter, signed by the executive officers of the state departments of health of Kansas and Missouri, was forwarded to the Surgeon General. Attached thereto were requests from the city officials of those three cities, copies of which are herewith appended as a part of this report:

TOPEKA, KAN., July 2, 1918.

Surgeon General Rupert Blue, M. D., United States Public Health Service, Washington, D. C.:

DEAR DOCTOR BLUE—The state departments of health of the states of Missouri and Kansas, joining with the municipalities of Kansas City, Mo., Kansas City, Kan., and Rosedale, Kan., request you to create an interstate metropolitan area including the cities of Kansas City, Mo., Kansas City, Kan., and Rosedale, Kan., and the contiguous territory surrounding these municipalities within a radius of five miles, for public health supervision and control.

The public-health problems, particularly the venereal-disease problem of this metropolitan area, is so great and so difficult, and has such an important bearing—not only directly upon the soldiers in training at Kansas City and the soldiers going to and from Camp Funston and Fort Leavenworth, but also upon the great civil population, estimated to be in the neighborhood of a half million people, which includes a large number of reserves of conscriptive draft age—as to merit the immediate attention and the active co-operation of your service to put in charge a man of the highest type and of known executive and organizing ability in public-health work. Appended hereto are requests from the municipalities above referred to.

The public-health situation is so important as to merit your earliest consideration.

Respectfully,

S. J. CRUMBINE, M. D.,

Secretary and Executive Officer, Kansas State Board of Health.

GEORGE P. JONES, M. D.,

Secretary and Executive Officer, Missouri State Board of Health.

ROSEDALE, KAN., June 29, 1918.

Surgeon General, U. S. Public Health Service, Washington, D. C.:

DEAR SIR—As mayor of the city of Rosedale, I desire to join the cities of Kansas City, Kan., and Kansas City, Mo., and the state health authorities of Kansas and Missouri in a request that you detail a man from your service to take complete charge of public-health administration in the area comprising the cities of Kansas City, Mo., Kansas City, Kan., and Rosedale, Kan.

Yours respectfully,

JOHN H. FEZLER, Mayor.

KANSAS CITY, MO., July 1, 1918.

Dr. Rupert Blue, Surgeon General, Public Health Service, Washington, D. C.:

DEAR SIR—On behalf of Kansas City, Mo., I, the mayor, join the authorities of Kansas City, Kan., and Rosedale, Kan., and the state health authorities of Missouri and Kansas in a request to the United States Public Health Service to detail a man to take complete charge of public-health administration in the metropolitan area composed of Kansas City, Mo., Kansas City, Kan., and Rosedale, Kan.

Respectfully,

JAMES COWGILL, Mayor.

KANSAS CITY, KAN., July 1, 1918.

Dr. Rupert Blue, Surgeon General, Public Health Service, Washington, D. C.:

DEAR SIR—On behalf of Kansas City, Kan., I, the mayor, join the authorities of Kansas City, Mo., and Rosedale, Kan., and the state health authorities of Missouri and Kansas in a request to the United States Public Health Service to detail a man to take complete charge of public-health administration in the metropolitan area composed of Kansas City, Mo., Kansas City, Kan., and Rosedale, Kan.

Respectfully,

H. A. MENDENHALL, Mayor.

At the present time negotiations are in progress looking toward establishing such an area in charge of the Surgeon General's office.

Similarly, efforts have been made at various times during the past year to create an interstate sanitary district which would include Cherokee and Crawford counties in Kansas, Jasper county in Missouri and Ottawa county in Oklahoma, which would be under the administrative control for public-health purposes of a trained sanitarian of the United States Public Health Service. Finally the consent of all interested parties was obtained, and the following letter was forwarded to Surgeon General Blue:

SEPTEMBER 17, 1918.

Surgeon General, U. S. P. H. S., Washington, D. C.:

DEAR SIR—We, the undersigned state health officers of the states of Oklahoma, Missouri and Kansas, herewith formally request that there be created a tristate sanitary district, composed of Ottawa county, Oklahoma, Jasper county, Missouri, and Cherokee and Crawford counties, Kansas, and that you appoint a representative of the U. S. P. H. S., a trained sanitarian, to take full and complete administrative control for public-health purposes of this tristate sanitary district.

Find attached hereto requests from the respective local districts interested. This district comprises the great lead-, zinc- and coal-mining districts of the three states mentioned, in which there is constant and free interchange of persons and things which makes it a peculiarly difficult problem in the control and suppression of communicable diseases, which if under one centralized head would make communicable disease control much more certain and efficient.

Respectfully yours,

A. R. LEWIS,

*Secretary and Executive Officer, Oklahoma
State Board of Health.*

GEORGE P. JONES,

*Secretary and Executive Officer, Missouri
State Board of Health.*

S. J. CRUMBINE,

*Secretary and Executive Officer, Kansas
State Board of Health.*

Action upon this request has not yet been taken.

Early in July request was made of the Surgeon General's office for the appointment as special agents for the United States Public Health Service of county health officers and city health officers of cities of the first class in Kansas, such appointment to be made for the purpose of obtaining more complete morbidity reports and to carry with it the franking privilege as special agents for the government. Consent of the service for this appointment has been secured and the final details have yet to be consummated, after which our morbidity reports will be placed upon what might be called a "Federal basis."

Lieut. Charles D. Shelton, detailed to the State Department of Health by the Surgeon General of the United States army, to assist in the enforcement of quarantine regulations, has been doing some most excellent work during the past summer.

In a recent memorandum concerning the enforcement of quarantine regulations throughout the state, a letter was addressed to Maj. Gen. Leonard Wood, in command of the military forces at Camp Funston, requesting that furloughs to soldiers in this state be withheld in certain districts where there was not sufficient enforcement of quarantine regulations and the prompt reporting of diseases, whereupon General Wood informed your executive officer that necessary instructions would be issued to the proper authorities to regulate furloughs in districts where

there was not sufficient enforcement of the public-health laws and quarantine regulations.

It is believed that with the coöperation of the army in the enforcement of this drastic measure, public opinion in local communities will force physicians and householders to a more complete and prompt compliance with the public-health laws, rules and regulations of this department.

The work of the Division of Venereal Diseases, under Capt. Millard Knowlton, detailed by the Surgeon General of the army to assist the department in venereal-disease control, has made notable progress since the annual meeting. All the cities of the first class and the larger cities of the second class have been visited, and in most of the cities thus visited the model ordinance for venereal-disease control has been passed. In most of the cities, too, some effort has been made toward the enforcement of such ordinance, although there are a few cities that are still delinquent along that line. The large number of women now in quarantine at the State Industrial Farm for Women and the increasing number of men in quarantine at the State Penitentiary testify to the efficient operation of these ordinances and the State Board of Health regulations.

Many more or less complicated problems, inseparable from the work of venereal-disease control, are constantly presenting themselves for solution, and it was thought that the quarterly meeting held at Lansing would afford the members of the Board an opportunity to see at first hand the means and methods used in quarantine, and to discuss with those in authority the many vexatious problems relating thereto.

Venereal-disease clinics have been established at the following places since the annual meeting: Rosedale, in the dispensary building of the School of Medicine, which is designed to serve Rosedale and Kansas City, Kan., and to be in charge of the medical staff of the School of Medicine at the University of Kansas; in the Federal building at Leavenworth, under the immediate charge of Dr. T. B. H. Anderson, deputy state health officer, and in the city building at Wichita, under the city department of health. An effort is now under way to establish a clinic in Topeka.

Plans are being made for continuing in a more intensive manner the state-wide educational campaign for the control of venereal diseases. The work in this division has been greatly hampered by reason of lack of funds, but this situation is expected to be relieved shortly through the grant of Federal aid, as provided in a bill passed by Congress creating a division of venereal diseases in the United States Public Health Service, and making an appropriation of one million dollars to be apportioned to the various states for state aid.

In July, A. G. Pike, food inspector for the department, resigned his position, to take effect September 1. Civil-service examination has been called to fill the vacancy caused by his resignation.

The Division of Water and Sewage has been greatly hampered in its work by the loss of personnel of engineers and employees in the Water and Sewage Laboratory. Altogether four engineers and assistant engineers have left the department to enlist in the service of their country, and two from the Water and Sewage Laboratory, including Prof. C. C. Young, director. Nevertheless, the work is proceeding with gratifying success under the leadership of F. M. Veatch, acting chief engineer. Mr. Veatch has some recommendations to make to the Board concerning the

water supply of several cities in the state. This recommendation we trust will meet with your approval.

Procedure has been started in the attorney-generals office against several cities to enforce compliance with the Board's orders, and on later report these matters will be presented for your consideration.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

Minutes of First Quarterly Meeting, 1918.

The State Board of Health met in quarterly session in the office of the warden of the State Penitentiary at Lansing, Kan., September 25, 1918. Upon roll call the following members of the Board were present: Doctor Axtell, presiding; Doctors Baird, Ewing, Aldrich, Earnest and Orr, a quorum being present.

The minutes of the annual meeting were read, and upon motion approved and ordered placed on file.

The secretary then read his report, which upon motion was approved and ordered placed on file.

The standards committee, in making their report, recommended a change in paragraphs 1 and 25, *b*, Flavoring Extracts, and upon motion, which was unanimously carried, all the members of the Board present voting in the affirmative, these paragraphs, a portion of regulation 35, were amended to read as follows:

REGULATION 35.

II. Vegetable Products.

D. CONDIMENTS (EXCEPT VINEGAR AND SALT).

b. FLAVORING EXTRACTS.

1. *Flavoring extract, extract, flavoring, flavor*, is a solution of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and conforms in name to the plant used in its preparation. Substances sold for flavoring under names used in the United States Pharmacopœia or National Formulary conform to the requirements of those authorities in respect to strength and quality.

25. An *imitation flavoring* is an uncolored solution consisting largely of artificial flavoring substances, is labeled as an imitation, and conforms in name to the flavor imitated.

Upon recommendation of Acting Engineer Veatch, W. A. Burton was appointed as assistant engineer of the State Board of Health for the remainder of the fiscal year 1918.

The Board, having previously visited the State Industrial Farm for Women, then engaged in a lengthy discussion of the various problems relating to the quarantine of venereally infected women. State Business Manager Kimball and Messrs. Green and Mason, of the State Board of Administration, were present and took part in the discussion, particularly that phase of the problem relating to the necessary finances to properly and effectively care for the treating of persons under quarantine for venereal disease in the State Industrial Farm for Women and at the Penitentiary for infected men.

Upon motion, the Board voted to send Captain Knowlton to Washington, in company with a representative of the State Board of Administra-

tion, for the purpose of seeking further Federal aid for the maintenance of the State Industrial Farm for Women in relation to the quarantine of venereally infected women.

Upon motion, leave of absence was granted to Dr. Lydia DeVilbiss for a maximum period of three and one-half months, providing she secure a substitute acceptable to the executive officer of the Board.

The engineer, F. M. Veatch, then presented to the Board his recommendations relating to the Leavenworth and Fort Leavenworth Water Company, and after a general discussion the following resolution was presented and unanimously adopted, the following members voting in the affirmative: Doctors Axtell, Baird, Ewing, Aldrich, Earnest and Orr.

WHEREAS, The Leavenworth and Fort Leavenworth Water Company, of Leavenworth, Kan., is at the present time furnishing water to the city of Leavenworth for domestic purposes; and

WHEREAS, The supply utilized by said company is the Missouri river, which is known to be highly polluted both by sewage and by solid matters in suspension; and

WHEREAS, The purification plant of the said company is incapable of adequately purifying the raw water at all times, due to its physical deficiency and to uncertain and inefficient methods of operation; and

WHEREAS, The said physical deficiencies and inefficient methods of operation have repeatedly been called to the attention of the officials of the said company, both by the Kansas State Board of Health, through its secretary and engineer, and by the United States Public Health Service, through its representatives in Leavenworth; and

WHEREAS, The said company has up to the present time not taken the proper steps to safeguard the water produced by their plant and furnished to the city of Leavenworth for domestic use, as shown by tests made in the laboratories of the Kansas State Board of Health and by inspection by members of the Division of Water and Sewage of the said Board; now, therefore, be it

Resolved, That the Leavenworth and Fort Leavenworth Water Company is hereby ordered to proceed without unnecessary delay to make the improvements in plant equipment and operation below:

1. Installation of suitable devices for adding coagulant.
2. Installation of mixing chamber to insure efficient use of chemicals.
3. Installation of baffles in basin No. 2 to insure the use of the entire basin capacity.
4. Installation of emergency hypochlorite plant for use in the event of a break-down in the liquid chlorine machine.
5. Suitable metering of pumps in order to ascertain the amount of water flowing through the plant.
6. Keeping of complete records of plant operation, and submission of same to the engineer of the Kansas State Board of Health at such times as he may demand them.

And be it further resolved, That plans and specifications for the above work shall be furnished to the engineer of this Board on or before the 15th of October, 1918.

The executive officer was instructed to send copy of the resolution and order to the Leavenworth and Fort Leavenworth Water Company by registered mail.

The following bills were audited and allowed:

Dr. J. T. Axtell	\$23.07
Dr. O. C. Baird	13.36
Dr. C. H. Ewing	25.15
Dr. H. L. Aldrich	29.86
Dr. W. M. Earnest	25.82
Dr. Jessie T. Orr	8.59

No further business appearing, the Board, upon motion, adjourned.

S. J. CRUMBINE, M. D.,
Secretary and Executive Officer.

SECOND QUARTERLY MEETING, 1919.

Held in the office of the secretary, Topeka, Kan., February 12, 1919.

Report of the Secretary.

The one overshadowing and overpowering event that has occurred since the first quarterly meeting last September was the devastating and death-dealing influenza that swept the state and which is still lingering with us, with but little sign of complete cessation. Starting at Camp Funston, through which it spread like a prairie fire, it soon spread to all parts of the state, accompanied by an unprecedented pneumonia complication and fatality rate.

The situation was made all the more tragic by reason of the depletion of the medical and nursing forces of the state, and thus many communities were left with small or no adequate medical and nursing service, adding greatly to the suffering and no doubt to the mortality in such communities.

These same conditions prevailing throughout the country, Congress made an attempt to meet the situation by voting an appropriation of one million dollars to aid the states in caring for the sick and dying. Through this means, having no appropriation of our own available for such purposes, we were able to send a modicum of relief to the more sorely stricken communities. The following record of aid that was given is but a small part of the help asked for, all of which emphasizes the necessity of the present legislature providing this department with an emergency fund to meet emergency crises, such as that through which we have just passed:

<i>Location.</i>	<i>No. of nurses.</i>	<i>No. of physicians.</i>
Thomas county—Colby	0	1
Barton county—Hoisington	0	1
Cherokee-Crawford district—Pittsburg, Galena, Carona, etc.....	0	4
Douglas county—Lawrence	3	0
Shawnee county—Topeka	11	0
Wyandotte county—Kansas City	0	5
Finney county—Garden City	7	3
Morton county—Elkhart	0	4
Totals	21	18

In addition to the aid thus furnished by the Federal government and the United States Public Health Service, the American Red Cross, through their local chapter, aided in the most generous fashion in the establishment of emergency hospitals and providing hospital supplies and nurses to care for the uncared-for sick and dying and the indigent poor.

As an index of the extent of the influenza epidemic, the following tabulation of cases and deaths reported to the Division of Communicable Diseases and the Division of Vital Statistics is herewith appended:

INFLUENZA AND PNEUMONIA DEATHS occurring during the months of October, November and December, 1918 (exclusive of the deaths occurring at Camp Funston and Fort Leavenworth):

	October.	November.	December.	Total.
Influenza	1,188	1,026	1,629	3,843
Lobar pneumonia	549	336	446	1,331
Broncho pneumonia	80	78	115	273
	1,817	1,440	2,190	5,447

INFLUENZA AND PNEUMONIA DEATHS occurring at Camp Funston and Fort Leavenworth during the months of October, November and December, 1918:

	October.	November.	December.	Total.
Influenza	256	2	16	274
Lobar pneumonia	753	34	32	819
Broncho pneumonia	0	16	14	30
	1,009	52	62	1,123

TOTAL INFLUENZA AND PNEUMONIA DEATHS occurring during the months of October, November and December, 1918 (including the deaths occurring at Camp Funston and Fort Leavenworth):

	October.	November.	December.	Total.
Influenza	1,444	1,028	1,645	4,117
Lobar pneumonia	1,302	370	478	2,150
	80	94	129	303
	2,826	1,492	2,252	6,570

Influenza and pneumonia deaths, three months, grand total, 6,570.

Cases and Deaths, 1918.

	INFLUENZA.		PNEUMONIA.	
	Cases.	Deaths.	Cases.	Deaths.
October	45,971	1,188	566	629
November	40,875	1,026	433	414
December	46,354	1,629	648	551
	133,200	3,843	1,647	1,594

Reported cases influenza and pneumonia..... 134,847
Reported deaths influenza and pneumonia..... 5,447

REMARKS: Estimated total number of cases occurring, 225,000.

- Failure to report all cases due to:
- (1) Lack of medical attendance in many cases.
 - (2) Physicians busy and failed to report.
 - (3) Physicians reported first case in family and failed to report subsequent cases.
- Apparent high fatality in pneumonia cases due to:
- (1) Physicians reported initial influenzal lesion but not pneumonia complication.
 - (2) Physicians failed to see many pneumonias until patients dying or dead. Note October death reports exceeded case reports.
 - (3) State regulations require reporting of lobar pneumonias and not broncho-pneumonias. Case reports include former only, while death reports include both.

I have asked for an emergency appropriation of \$50,000 from the present legislature—\$25,000 to be expended in research and investigation, and, if thought advisable, in the manufacture of protective vaccines for state-wide distribution; and \$25,000 to finance a mobile medical and nursing force for service in event of another widespread epidemic.

I earnestly recommend that the Board at this session pass strong resolutions for transmission to the ways and means committee of the house and senate requesting favorable action on this measure.

OTHER LEGISLATION.

The department has presented to the legislature bills providing that the state be divided into sanitary districts, to be presided over by full-time health officers; also legislation outlining the government's request for venereal-disease control, and creating a division of venereal disease—all in conformity with the action taken by the Board at its last annual meeting.

It is respectfully recommended that the Board take such action concerning these legislative matters as meets with their approval and submit same to the proper committees of the legislature.

The routine business of the department is progressing in the usual way, and owing to the transcendent importance of the matters above described it is thought that the entire time of this session might well be devoted to a consideration of them.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

Minutes of Second Quarterly Meeting, 1919.

The second quarterly meeting of the State Board of Health was held in the office of the secretary, Topeka, Wednesday, February 12, 1919.

Upon roll call the following members were present: Dr. J. T. Axtell, president, presiding; Dr. C. E. Coburn, Dr. Jessie T. Orr, Dr. C. H. Ewing, Dr. O. D. Walker, Dr. O. C. Baird.

Of the advisory members of the Board the following were present: Prof. L. E. Sayre; Prof. W. S. Long, representing Professor Bailey; Francis Veatch, jr., engineer; Prof. Frank Blackmar.

Conferee present: J. F. Tilford.

A quorum of the Board being present, the secretary was requested to read the minutes of the last quarterly meeting, which upon motion was ordered to be placed on file. The quarterly report of the secretary was then read, and upon motion was received and ordered placed on file.

Discussion of the recommendations made in the secretary's report then ensued, and the following resolution was unanimously adopted:

WHEREAS, The memory of the devastating epidemic of influenza through which the state has just passed is fresh in our minds; and

WHEREAS, The lesson learned in this epidemic should remind us to be prepared for other epidemics which may follow; and

WHEREAS, There is now greater danger than usual of epidemics being started in this country by the unusual movement of population attending demobilization of our armies, such as typhus fever, cholera, trench fever, or tropical or parasitic diseases; and

WHEREAS, The State Board of Health feels its obligation to take all necessary precaution to safeguard the health of the people.

Be it resolved, That the Kansas State Board of Health, in regular meeting assembled, declare it to be the sense of the Board that the state of Kansas should provide an emergency fund for the purpose of dealing with any epidemic that may arise; and

Be it further resolved, That the Board urge the ways and means committee of the Kansas state legislature to speedily give favorable consideration to the measure now pending for the appropriation of \$25,000 to be used for the production of protective vaccines

and for research into the causes of epidemics, and for an additional \$25,000 for a mobile voluntary force of physicians and nurses for emergency duty in case of epidemic; and

Be it further resolved, That a committee of the Kansas State Board of Health be instructed to present a copy of these resolutions to the ways and means committee of the house and senate and to impress such committees with the seriousness of the situation and with the earnestness of the Board in recommending an emergency fund to provide for meeting such a contingency.

The legislation pertaining to public-health measures now pending was presented to the Board, and upon motion the Board approved of the bills providing for venereal-disease control and for the creation of sanitary districts, presided over by full-time health officer.

The committee on standards and definitions then made their report, and upon their recommendation the following definitions and standards—to become a part of regulation 35, subdivision c, Edible Vegetable Oils and Fats—and the following amendments to regulation 35 were unanimously adopted and ordered to be printed in the official state paper:

REGULATION 35.

II. Vegetable Products.

D. CONDIMENTS (EXCEPT VINEGAR AND SALT).

c. EDIBLE VEGETABLE OILS AND FATS.

Edible fats and edible oils are such glycerids of the fatty acids as are recognized to be wholesome foods. They are dry and sweet (not rancid in flavor and odor).

Soy-bean oil, soy oil, soja oil, is the edible oil obtained from the seed of the soy-bean plant (*Glycine soja* L.; *Soja hispida*, Sieb. et Zucc.; *Soja max*, (L.) Piper).

Palm kernel oil is the edible oil obtained from the kernels of the fruit of the palm tree (*Elacis guineensis* L., or *Elacis melanococca* Gärt).

Paragraphs 1, 3, 5, 7, 9, 11, 14, 15, 17, 19 and 20, under subdivision c, Edible Vegetable Oils and Fats—Division D, Condiments (except Vinegar and Salt)—were amended to read as follows:

Olive oil, sweet oil, is the edible oil obtained from the sound, mature fruit of the olive tree (*Olea europaea* L.).

Cottonseed oil is the edible oil obtained from the seed of the cotton plant (*Gossypium herbaceum* L.), or from the seed of other species of *Gossypium*.

Peanut oil, arachis oil, earthnut oil, is the edible oil obtained from the peanut (*Arachis hypogaea* L.).

Sesame oil, gingili oil, teel oil, benne oil, is the edible oil obtained from the seed of the sesame plant (*Sesamum indicum*, De Candolle; *Sesamum Radiatum*, Schum and Thonn; *Sesamum orientale* L.).

Poppy-seed oil is the edible oil obtained from the seeds of the poppy (*Papaver somniferum* L.).

Coconut oil, copra oil, is the edible oil obtained from the kernels of the coconut (*Cocos nucifera* L., or *Cocos butyracea* L.).

Rape-seed oil, rape oil, colza oil, is the edible oil obtained from the seed of the rape plant (*Brassica napus* L.), or from the seed of closely related *Brassica* species, which yields oils similar in composition and character to the oil obtained from the seed of *Brassica napus* L.

Sunflower oil is the edible oil obtained from the seed of the sunflower (*Helianthus annuus* L.).

Corn oil, maize oil, is the edible oil obtained from the germ of Indian corn, maize (*Zea mays* L.).

Cacao butter, cocoa butter, is the edible fat obtained from sound cacao beans (*Theobroma cacao* L.), either before or after roasting.

Original paragraphs 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19 and 20 of this subdivision are hereby repealed.

II. Vegetable Products.

O. SUGARS AND RELATED SUBSTANCES.

a. SUGARS AND SUGAR PRODUCTS.

Sugars.

Paragraph 3 was amended to read as follows:

Maple sugar, maple concrete, is the solid product resulting from the evaporation of maple sap or maple sirup.

Sirups (Syrups).

Paragraph 4 was amended to read as follows:

Maple sirup is sirup made by the evaporation of maple sap or by the solution of maple concrete, and contains not more than thirty-five per cent (35%) of water and weighs not less than eleven (11) pounds to the gallon (281 cu. in.).

Upon motion, the following resolution was adopted and ordered to be printed in the official state paper:

(Amendment to resolution passed June 25, 1918.)

Resolved, That all buyers of eggs, except the consumer, shall candle every lot of eggs bought except those eggs that have been previously candled and maintained at a temperature of 40° F. or below: Provided, that eggs that are produced between the first day of January and the first day of May are not required to be candled.

Upon motion, a resolution relating to the pollution of waters from oil wastes was adopted and the secretary instructed to send copies to the proper committees in the legislature. The resolution follows herewith:

WHEREAS, The water supplies of cities and private families in various parts of the state have been grossly polluted by highly mineralized water from oil-well drilling and operation; and

WHEREAS, The existing laws of the state have proved inadequate for the prevention of this condition: therefore, be it

Resolved, That it is the sense of this Board that the present legislature should pass a law providing for the following points:

1. The establishment of a competent commission or bureau to have charge of oil- and gas-well operation in the state of Kansas.

2. That this commission or bureau be provided with funds and help necessary to allow them to study the conditions operating in the oil fields with special reference to salt-water productions, and to enforce rules and regulations formulated for the purpose of protecting the waters of the state.

The following bills were audited and allowed:

Dr. J. T. Axtell.....	\$18.05
Dr. Jessie T. Orr.....	12.28
Dr. C. H. Ewing.....	14.95
Dr. C. E. Coburn.....	5.00
Dr. O. D. Walker.....	21.34
Dr. O. C. Baird.....	19.91
Prof. L. E. Sayre.....	4.04
Prof. W. S. Long.....	2.32
Prof. Frank Blackmar.....	2.12

No further business appearing, the Board, upon motion, adjourned.

S. J. CRUMBINE, M. D., *Secretary*.

THIRD QUARTERLY MEETING, 1919.

Held in the offices of the Secretary, Topeka, Kan., April 9, 1919.

Report of the Secretary.

To the Members of the State Board of Health:

The secretary will not attempt to make any review of the work done by the department since our last quarterly meeting.

LEGISLATION. The legislature has met and adjourned and passed no new legislation of vital interest to the State Board of Health. Several minor bills of more or less interest were passed by the legislature, but none concerning venereal-disease control, and the proposed bill providing for dividing the state into sanitary districts, to be presided over by a full-time health organization, failed of passage. The necessary appropriation for carrying on the work of the division of venereal diseases also failed of passage.

DIVISION OF VENEREAL DISEASES. The congressional appropriation providing for the distribution of funds to the states for venereal-disease control is conditioned, in the second year's distribution, on states matching the government funds dollar for dollar. It is necessary, therefore, if we are to receive any government aid, to make a showing to the Federal department that certain state funds, while not appropriated directly to the Division of Venereal Diseases, can be and are used in the various phases of venereal-disease control. In the budget of the State Board of Health for the next two years is an item of \$10,000 each year "for research and investigation into the cause of disease and for the suppression and control of communicable, industrial and occupational diseases." It is recommended that, in order to carry on the work of the new Division of Venereal Diseases, and to have a basis for claiming a like amount from the government for such purposes, that the Board set aside \$5,000 each year of the \$10,000 appropriated in this item, for the special purpose of the control of venereal disease, it being one of the communicable diseases, and, therefore, in the opinion of the attorney-general, comes within the scope of the appropriation.

The legislature made quite a generous appropriation for the maintenance, care and treatment of the inmates of the State Industrial Farm for Women at Lansing. The larger proportion of the inmates being venereally infected women there under quarantine, it is thought that the government may recognize this as an appropriation for venereal-disease control, if a proper showing is made before the appropriate department at Washington. I therefore recommend that Capt. Millard Knowlton, chief of the Division of Venereal Diseases, be authorized to go to Washington to make such a showing to the government and make

application to the government for our usual allotment of funds for our Division of Venereal Disease Control for the next fiscal year.

EPIDEMIOLOGIST. The members of the Board already know of Doctor Sippy's acceptance of the position of epidemiologist of the Montana State Board of Health. Immediately upon Doctor Sippy indicating his acceptance of this position I called up the president of the Board, and upon his consent and advice I offered the position to Dr. T. D. Tuttle, then state health officer of the state of Washington. Doctor Tuttle has signified his acceptance of the position. I therefore recommend confirmation of his appointment.

PUBLIC-HEALTH NURSING. I think that sanitarians and public-health workers, including the foremost thinkers and men advanced in the profession, are all agreed that one of the greatest advances made in public-health work is through the use of intelligent, well-trained public-health workers. The demand for public-health nurses as school nurses, community-welfare nurses and municipal and county nurses has been so great and insistent that the places could not be filled with trained workers, and thus the work has been brought into disrepute and discredit in many places. Yet in spite of all that the demand is growing by leaps and bounds, and there is already in Kansas somewhere in the neighborhood of thirty or forty public-health nurses at work in various communities and schools of the state.

Recently the State Tuberculosis Association has put thirteen highly trained, and we believe very competent, public-health nurses in certain districts in the state, and we are expecting some very excellent work to be accomplished by these nurses along public-health lines, with particular reference, of course, to that of tuberculosis, especially in relation to the returned tubercular soldier.

TUBERCULOSIS. Ever since the State Tuberculosis Association has been in existence it has been working in close coöperation and touch with the State Board of Health; indeed, it was organized by the secretary during the first term of Governor Hoch's administration, and during all these years the State Tuberculosis Association has been, in effect, the division of tuberculosis of the State Board of Health. During the past year, by grant of funds from the national association, together with what funds were secured the year previous from Red Cross seal sales, the association had sufficient money—with the genius of its secretary, Dr. John J. Sippy—to organize the work on a state-wide basis, and put these thirteen nurses under a very fine supervisor in the field, after having had an extensive course in public-health training, which was given here in Topeka in a school of public-health nursing conducted by the chiefs of the department in coöperation with certain University teachers.

In order that there may be some recognized supervision and standards for public-health nursing in the state, and that the entire work may be correlated and supervised by some authoritative state agency, it is recommended that a Bureau of Public Health Nursing be created as a bureau of the Division of Communicable Diseases; that the supervising nurse of the State Tuberculosis Association, Mrs. Virginia K. Kimble, be desig-

nated as supervising nurse for the bureau and for all public-health nurses in the state, at a salary of one dollar a year; and that the nurses under her, working in the various sections in the state, be likewise employed by the bureau at a salary of one dollar a year each, payable December 31 of each year; that they be given certificates designating them as "public-health nurses of the Bureau of Public Health Nursing of the State Board of Health," and as regularly authorized representatives or agents of the State Board of Health, granting them all the rights and authority of representatives or agents of the State Board of Health.

It seems to me here is an unusual opportunity of having a group of highly trained, competent women as virtual employees of the State Board of Health, so far as the character of the work is concerned, although in fact they are the employees of the State Tuberculosis Association, which pays their salary and expenses.

BIOLOGICAL PRODUCTS. The very greatly increased cost of biological products has necessitated that E. R. Squibbs Company submit new prices for their agreement with the state department of health, which prices are very satisfactory compared with the present average price on biological products throughout the world. It is recommended that the Squibbs agreement be continued indefinitely under the new schedule presented.

WATER AND SEWAGE. On April 1 the following order was made on the city of La Cygne and regularly transmitted to the mayor of the city by registered mail:

WHEREAS, The city of La Cygne, Kan., maintains a waterworks system in the state of Kansas and is furnishing water for domestic purposes to the public within said state; and

WHEREAS, The quality of this water furnished by said city has been found to be grossly contaminated with intestinal bacteria, and therefore to be prejudicial to the health of the users thereof; and

WHEREAS, After due notification of this condition, the city officials of La Cygne, Kan., have taken no steps toward safeguarding the quality of this water:

Therefore, By virtue of authority vested in us by section 10186, General Statutes of Kansas of 1915, we hereby order the city of La Cygne to install adequate apparatus for sterilizing the city water with chlorine or one of its compounds, said apparatus to be approved by the engineer of the Kansas State Board of Health and erected subject to his approval not later than April 15, 1919.

S. J. CRUMBINE,
Secretary, Kansas State Board of Health.

F. M. VEATCH,
Engineer, Kansas State Board of Health.

As required by section 10193, General Statutes of Kansas, 1915, this order is hereby confirmed by the governor and attorney-general of the state of Kansas.

HENRY J. ALLEN, *Governor.*

RICHARD J. HOPKINS, *Attorney-General.*

Dated at Topeka, Kan., April 1, 1919.

Mayor, La Cygne, Kan.:

APRIL 8, 1919.

DEAR SIR—I am inclosing herewith an order under the water and sewage law, signed by the secretary and engineer of the State Board of Health, the governor and the attorney-general, under the general statutes known as the water and sewage law.

You should pursue without unnecessary delay the installing of the sterilizing apparatus required in the order, not later than April 15.

Please notify this office as soon as the same is installed.

Respectfully, S. J. CRUMBINE, M. D., *Secretary.*

It is recommended that this order, signed by the governor and the attorney-general, be likewise approved by the State Board of Health in regular session.

The state fire marshal and your secretary viewed the county courthouse and jail of Crawford county, after which the following order was presented to the commissioners:

We, the undersigned, L. T. Hussey, state fire marshal of the state of Kansas, and Dr. S. J. Crumbine, secretary of the State Board of Health of the state of Kansas, do hereby certify that on this the 26th day of March, 1919, we have, in person, carefully and duly examined the courthouse and the jail of Crawford county, Kansas, said courthouse and said jail being located in the city of Girard, in said county of Crawford and state of Kansas, and we find said courthouse and jail in said Crawford county, Kansas, and each of them, to be in an unsafe condition, and we recommend that said courthouse and jail of Crawford county, Kansas, located in said city of Girard, in said county and state, and each of them, be replaced by new buildings.

In witness whereof, we have hereunto set our hands at the city of Girard, in Crawford county, Kansas, this 26th day of March, 1919.

L. T. HUSSEY,
State Fire Marshal of the State of Kansas.

S. J. CRUMBINE, M. D.,
*Secretary of the State Board of Health of
the State of Kansas.*

STATE OF KANSAS, CRAWFORD COUNTY, ss.

Be it remembered, that on this 26th day of March, A. D. 1919, before me, a notary public in and for said county and state, came L. T. Hussey, state fire marshal of the state of Kansas, and Dr. S. J. Crumbine, secretary of the State Board of Health of the state of Kansas, to me personally known to be the same persons described in and who executed the foregoing instrument, and duly acknowledged the execution of the same.

In witness whereof, I have hereunto subscribed my name and affixed my official seal, the day and year last above written.

[Seal.]

JESSIE SMITH, *Notary Public.*

My commission expires December 31, 1919.

This order was made in conformity with a law passed by the recent legislature giving the state fire marshal and the state executive officer such authority.

Respectfully submitted. S. J. CRUMBINE,
Secretary and Executive Officer.

Minutes of Third Quarterly Meeting, 1919.

The third quarterly meeting of the State Board of Health was held in the office of the secretary, in the statehouse, Topeka, Kan., April 9, 1919.

Upon roll call the following members of the Board were present: Dr. J. T. Axtell, president, presiding; Doctors Coburn, Walker, Aldrich, Ewing and Orr.

A quorum being present, the minutes of the last quarterly meeting were read and approved and ordered placed on file.

The quarterly report of the secretary was then read, whereupon the secretary's recommendations were taken up for discussion.

Upon motion the following resolution was unanimously adopted:

RESOLUTION of the Kansas State Board of Health making application for Kansas allotment of government funds for venereal-disease work for the fiscal year ending June 30, 1920:

WHEREAS, The recent legislature made an appropriation of \$10,000 per year for the next biennium to the State Board of Health, 'for research and investigation into the cause of disease, and for the suppression and control of communicable, industrial and occupational diseases'; and

WHEREAS, Other appropriations having relation to venereal-disease control were made to the State Board of Administration; and

WHEREAS, It is the wish and desire of the State Board of Health that the Division of Venereal Disease be continued and that the present activities of the division be carried forward until the next legislature meets, when it is hoped ample appropriations may be made for continuing the work; and

WHEREAS, Federal funds are available for carrying forward this work, on condition that such funds be duplicated by state funds specifically appropriated or otherwise set aside for the prevention, control and treatment of venereal disease: therefore, be it

Resolved, That the State Board of Health hereby sets aside \$5,000 per year of the appropriations mentioned in the foregoing, the said sum of \$5,000 per year to be used by the Division of Venereal Disease for the prevention, control and treatment of venereal disease; and be it

Further resolved, That the Kansas State Board of Health respectfully lay claim to the entire Kansas quota of government funds available for the prevention, control and treatment of venereal disease next year, said claim to be based on the \$5,000 herewith set aside for such purpose and the additional sums appropriated to the State Board of Administration for the maintenance and treatment of persons under quarantine for venereal disease, together with a possible allotment of funds by the State University School of Medicine for the support of the Wassermann laboratory; and be it

Further resolved, That a copy of these resolutions be forwarded to the Surgeon General of the United States Public Health Service by the executive officer of the Kansas State Board of Health.

Whereupon Capt. Millard Knowlton, chief of the Division of Venereal Diseases, was requested to proceed to Washington to consult with the Assistant Surgeon General, Dr. C. C. Pierce, of the Division of Venereal Diseases of the United States Public Health Service, to make application on behalf of the Board of Health for an allotment of funds for venereal-disease control.

The resignation of Doctor Sippy as epidemiologist was then presented, which reads as follows:

TOPEKA, April 5, 1919.

To the Kansas State Board of Health (attention Dr. S. J. Crumbine, Secretary):

DEAR DOCTOR—It is with deep regret that I am constrained to sever my connection with the Kansas State Board of Health. I have thoroughly enjoyed the associations for the past six years with the personnel of the State Board of Health and of its executive and office force. I am sure no man could wish for a more loyal coöperation and support than has been given to me. I am leaving my work with a deep sense of a debt of gratitude for the education which has been given me during my connection with the Division of Communicable Disease. I am offering my resignation to take effect May 1.

JOHN J. SIPPY, M. D., *Epidemiologist*.

Upon motion, Doctor Sippy's resignation was accepted, to take effect May 1.

The recommendation of the secretary, which had previously had the approval of the president of the Board, that Dr. T. D. Tuttle, former state health officer of Washington, be appointed as epidemiologist of the State Board of Health, vice Dr. John J. Sippy, resigned, was upon motion unanimously approved. Doctor Tuttle's term of service begins May 1, 1919, to fill the unexpired term of Doctor Sippy.

The recommendation of the secretary concerning the creation of a

Bureau of Public Health Nursing in the Division of Communicable Diseases was, upon motion, ratified, as follows:

MOVED, In order that there may be some recognized supervision and standards for public-health nursing in the state, and that the entire work may be correlated and supervised by some authoritative state agency,

IT IS ORDERED, That a Bureau of Public Health Nursing be created as a bureau of the Division of Communicable Diseases; that the supervising nurse of the State Tuberculosis Association, Mrs. Virginia K. Kimble, be designated as supervising nurse for the Bureau of Public Health Nursing, Division of Communicable Diseases of the Kansas State Board of Health, and as supervising nurse for all public-health nurses in the state; and that the nurses working directly under her supervision in the various sections in the state be employed by this bureau at a salary of one (1) dollar a year; that they be given certificates designating them as public-health nurses of the Bureau of Public Health Nursing of the State Board of Health, and as regularly authorized representatives or agents of the State Board of Health, granting them all the rights and authority as representatives or agents of the State Board of Health.

Unanimously approved.

The new prices for Squibb's biological products, distributed by the State Board of Health, were upon motion unanimously approved.

The following is a schedule of prices submitted by E. R. Squibb & Sons, being the prices approved by the Board and to prevail in the state until such time as upon motion either E. R. Squibb & Sons or the State Board of Health may dissolve this agreement:

Schedule of Prices on E. R. Squibb & Sons Biological Products, Effective in the State of Kansas.

Diphtheria antitoxin—syringe package:	
1,000 units	\$0.75
3,000 units	2.00
5,000 units	3.00
10,000 units	5.00
Typhoid vaccine:	
30-ampule package, hospital	\$3.60
3-ampule package .....	.36
20 cc. vial package	1.80
3-syringe package	1.20
Smallpox vaccine:	
Packages of ten vaccinations	\$1.00

From the above schedule of prices retail distributors will receive a trade discount of 25 per cent.

On all other biological products listed in the Squibb price list, retail distributors will be allowed a trade discount of 40 per cent.

Schedule of Net Prices on E. R. Squibb & Sons Biological Products When Purchased Direct by Board of Health of the State of Kansas.

Diphtheria antitoxin—syringe package:	
1,000-unit package	\$0.48
3,000-unit package	1.27
5,000-unit package	1.91
10,000-unit package	3.19
Typhoid vaccine:	
30-ampule package, hospital	\$3.00
3-ampule package .....	.30
20 cc. vial package	1.50
3-syringe package	1.00
Smallpox vaccine:	
Package of ten vaccinations	\$0.80

In addition the Board of Health of the state of Kansas will be allowed a trade discount of 40 per cent on all other biological products listed in the Squibb price list.

The order made by the engineer and the secretary and concurred in by the governor and the attorney-general on the city of La Cygne to improve its water supply, as shown by the secretary's report, was, upon unanimous vote of the Board, approved.

Upon motion, the secretary was instructed to appoint members of the Board a committee of one to make sanitary inspections of state institutions, upon the order of the governor.

The following bills were audited and allowed:

Dr. J. T. Axtell	\$18.66
Dr. C. E. Coburn	8.92
Dr. O. D. Walker	21.14
Dr. H. L. Aldrich	24.10
Dr. C. H. Ewing	22.23
Dr. Jessie T. Orr	13.70

No further business appearing, the Board, upon motion, adjourned.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

ANNUAL MEETING, 1919.

Held in the office of the Secretary, Topeka, Kan., June 26, 1919.

Report of the Secretary.

To the Members of the State Board of Health:

Not since the angels sang on the plains of Bethlehem heralding a new era of "peace and good will" has the world passed through an epochmaking crisis time as that of the past year. Crucial as the test has been to organized governments and democratic institutions, the test of the military strength of nations, as reckoned in the physical manhood of its young men, has been no less severe. For the first time in our history we have a cross-section of the physical strength and the physical weakness of the youth of our country as revealed by the physical examination of some three million (3,209,446) of our young men between the ages of twenty-one and thirty-one.

There have been many compensations that have come to the world as the result of the war, and there can be no doubt but that in the coming days many others will become known and more and more appreciated as their compensating values unfold; but in my judgment one of the greatest compensations—the direct result of the war—is the revelation of our weaknesses, chief of which is our physical weakness.

Doctors all know and appreciate the fact that the first and most important thing to do when they visit a sick person is to find out, if possible, just exactly what ails the patient. When that knowledge is gained the application of the remedy is, as a rule, obvious. This nation now knows what ails our young men—the young men who are to be the next rulers of the government, the potential strength of the nation—and the nation, knowing, ought to have the good sense and foresight to apply the appropriate remedy. We await with intense interest the action of the government.

David Lloyd-George declared, in what was, in my judgment, the most notable address of the war, that the care of the public health was the secret of national strength and the secret of national recuperation. He criticized the government severely for the neglect of the physical welfare of the people in the past, and pledged the people that one of the first and most important legislative matters in the reconstruction program would be for better safeguarding the public health, and concluding he declared with great emphasis that "you cannot make an A-1 empire out of 3-C population. The great premier has kept his pledge, and a Ministry of Public Health for Great Britain has been established.

If I read the signs of the times aright, there will be in the not distant future a world-wide irresistible movement for safeguarding the public health and bettering the physical welfare and comfort of the people.

These movements will come through several channels or agencies, governmental and extragovernmental, and will include, among the former, largely increased means and resources for national and state departments of health, full-time local health organizations, social or health insurance, and, finally, state medicine, or something closely related thereto. Extragovernmental agencies, such as the Red Cross, national and state tuberculosis associations, and organizations of similar character, will have immense resources and wield a wide and powerful influence. Already the Red Cross has announced that its next big work, now that the war is over, is the giant task of the public health, and the advance guard of that great organization, the Red Cross public-health nurse, is being placed, or will be placed, in every county in every state in the Union. We will do well to keep these things in mind and be prepared to take our full part in this world movement or be shoved aside by other organizations or agencies which will meet the public demands and keep pace with the forward march of progress.

DIVISION OF VITAL STATISTICS. During the past year the Division of Vital Statistics has been more or less handicapped by reason of the fact that its chief, the state registrar, was serving his country in France. The multitude of duties falling to the executive practically precluded the possibility of his devoting much time to the position of acting state registrar, to which he was assigned over a year ago. The assistant state registrar, L. P. Kistler, has given very efficient service, particularly in view of the fact that he is not a physician and that much of the work of the division was entirely new to him. With the return of Doctor Lerrigo the supervision of the division will go forward with a new energy, and matters that had been postponed or disregarded will be brought up to date and the division put in its rightful place in the department. The personnel of this division is unusually competent and highly satisfactory, and with the state registrar's ability to analyze and place before the public in an interesting manner the important data gathered, we can look forward with expectations of augmenting and promoting an increased usefulness of this division.

It is highly important that birth and death certificates, which are by the law designated as permanent records, should be written in black ink, so as to make an unfading and permanent record. In order to make this mandatory it is recommended that a rule be formulated requiring that birth and death certificates be written in black, unfading ink. It is further recommended that a rule fixing the period of fetal life at which a stillbirth becomes reportable as a birth and a death at some definite period. The time usually fixed by boards, or in law, is the seventh month of interuterine life.

One of the results of the war during the past year has been a decreased number of marriages. Thus the revenue available for the conduct of this division has been very considerably reduced. In order to meet this emergency a request was made to the legislature that \$2,000 in addition to the fees be granted for financing the division. This the legislature granted.

In response to an inquiry to the attorney-general as to whether or not

the division should receive and file birth and death certificates of births and deaths occurring prior to the enactment of the vital-statistics law of 1911, and whether or not, if so received and filed, duplicate copies could be issued therefor having the same legal status as birth and death certificates filed and reported since the passage of the vital statistics law, the following information was rendered:

TOPEKA. January 28, 1919.

The State Board of Health, Statehouse:

GENTLEMEN—Referring to your inquiry concerning the registration of death certificates where the death occurs prior to the enactment of the vital-statistics law of 1911, it is the opinion of the attorney-general that it is within the province of the State Board of Health to formulate rules and regulations governing the registration of deaths occurring prior to the enactment of the vital statistics law of 1911; but it is suggested that such rules and regulations should look to and provide for the furnishing of extrinsic evidence in the form of affidavits or certificates of attending physicians or other persons acquainted with the facts, and that in no case should certificates be registered or certified copies thereof issued until the department has satisfied itself as to the state of facts existing in each case.

Respectfully,

RICHARD J. HOPKINS, *Attorney-general.*

It is therefore recommended that a rule be formulated covering the recommendations made by the attorney-general, so that such certificates may be properly and legally entered and recorded. The increasing demand for certificates to prove citizenship and to adjust insurance, pension and war risk claims has made it desirable that these certificates be received and filed.

THE DIVISION OF COMMUNICABLE DISEASES AND SANITATION. The state of Montana, recognizing the efficiency of our former epidemiologist, the chief of this division, Dr. John J. Sippy, has outbid Kansas and secured his services. He has been succeeded, by the advice and consent of the president of the Board, by Dr. T. D. Tuttle, former state health officer of the states of Montana and Washington. So the Board may be assured that the high-grade work for which Doctor Sippy was properly notable will be continued under the direction of the new epidemiologist.

The most notable occurrence in this division during the past year was the great destructive and terrifying epidemic of influenza, which swept the state like a prairie fire during the months of October, November and December, gradually dying down during the succeeding winter months until in the month of May there has been approximately 400 cases reported throughout the state. Notwithstanding the awful toll of life that has been exacted through complications resulting from influenza, and notwithstanding the thousand laboratories and research workers throughout the world bending every energy toward the discovery of the organism, the cause of the disease, and by such discovery the means and methods of its dissemination, we find ourselves in possession of no definite information that will enlighten public-health workers or that may assist in successfully coping with succeeding epidemics. We can only express the hope that, in the near future definite and reliable information may be forthcoming which will be a guide to health authorities in their efforts to cope with this plague. The following number of cases of influenza were reported:

State Totals of Influenza and Pneumonia.

	Influenza.	Pneumonia.
1918—September	277	...
October	45,971	...
November	40,875	433
December	46,854	648
1919—January	16,001	325
February	10,274	264
March	13,859	310
Totals	173,611	1,980
1917—September		10
October		29
November		84
December		176
1918—January		249
February		310
March		806
Totals		1,164

The deaths resulting from influenza and its complications as compiled in the Division of Vital Statistics during the months October and March, inclusive, totaled 9,117, of this number 1,236 having been reported from the army camps.

The manner of handling the epidemic is a matter of reports previously made to the Board.

FULL-TIME HEALTH ORGANIZATIONS. Since the last report Marion county has adopted the full-time health organization plan, Dr. J. J. Entz, of Hillsboro, being named the full-time health officer. I regret to announce that the full-time health organizations in the extracantonment zone around Camp Funston, comprising Riley and Geary counties, and the extracantonment zone around Fort Leavenworth, comprising Leavenworth county, will on the first of July be abandoned by the Federal government, operating through the United States Public Health Service. It was confidently expected that the demonstration of the full-time health organization in these counties would result in the counties and cities taking the work over, but in this we are disappointed. However, the full-time health organization idea is making progress, the county board of health of Cherokee county having employed a full-time health organization for that county. The cities of Wichita, Topeka and Lawrence are now on a full-time basis, and it is confidently hoped that during the coming year many other cities and a number of counties may be added to the growing list. This spring and summer organized effort is being made to induce counties and municipalities to put on typhoid and smallpox vaccination campaigns. Thus far about thirty counties have become interested and are arranging or have already put on the campaign, the state department of health furnishing the vaccines free and the physicians of the community administering it. The continual contact with persons of the chronic typhoid-carrier type, who are constantly capable of disseminating typhoid organisms despite the excellence of sanitary surroundings, must be our excuse for insisting upon immunization of as large a per cent of the population as possible before we can hope for a reduction of the typhoid rate in Kansas. The typhoid rate has been reduced from approximately 21 per cent ten years ago to 16.4 per cent in 1918. It seems altogether likely that some means

must be provided for immunizing the general population against pneumonia if we are to expect very great reduction of the staggering rate which now heads the list of deaths from all other communicable diseases. It has been shown that vaccination against types one, two and three pneumococci produce a fair degree of immunity from pneumonia of these types.

DIVISION OF WATER AND SEWAGE. No other division of the Board's work has been so seriously affected by the war as this division, the chief sanitary engineer, Prof. C. A. Haskins, and all of his assistants, together with the director of the Water and Sewage Laboratory and one of his chemists, having entered the service of their country by enlistment in the various divisions of the United States army. Yet despite this handicap the work of this division has gone forward under the supervision of the acting chief sanitary engineer, Francis M. Veatch, jr., and much very important work has been accomplished. Probably the most serious problem confronting the department is the pollution of the natural waters of the state by the great industrial development going on in the oil fields of Butler and Marion counties. In the deep drilling required in these fields several strata of salt water are encountered, which, if not properly cased off by a process known as mudding or cementing, will pollute the water, as has been reported to the Board on other occasions. The Walnut river has become so salty and carries so much oil waste as to seriously affect, if not entirely put out of commission, the water supplies of the cities whose source of supply is the Walnut river. The city of Winfield has been obliged to abandon that river as its source of supply and go to the Little Arkansas valley some four or five miles distant, for its supply. With the opening up of the Marion county field, the principal part of which is on the drainage area of the Cottonwood river, a tributary of the Neosho, the danger extends to the water supply of all those cities in southeast Kansas, the source of supply of which is the Neosho river, all having their water so grossly polluted as to render it unfit for domestic use. I think the seriousness of the situation cannot be overemphasized, and the legal resources of the state should be called upon and utilized in preventing the unnecessary pollution of the natural waters of the state through careless or improperly conducted oil-well production.

DIVISION OF FOODS AND DRUGS. The most notable event occurring in this division during the last year is the decision of the United States Supreme court in what is known as the "Mary Jane syrup case."

About five years ago the Corn Products Company, a subsidiary of the Standard Oil Company, entered suit against the Kansas State Board of Health to enjoin them from enforcing regulations adopted by the Board under the food and drugs act, which regulation requires that—

"(1) In the case of syrups, the principal label shall state definitely, in conspicuous letters, the percentage of each ingredient, in the case of compounds, mixtures, imitations or blends. When the name of the syrup includes the name of one or more of the ingredients, the preponderating ingredient shall be named first."

The case came to trial in the second division of the Shawnee county district court, which decision was in the main adverse to the State Board

of Health, whereupon Assistant Attorney-general Hunt, on behalf of the State Board of Health, appealed the case to the state supreme court, whereas a decision was secured setting aside the findings of the lower court; whereupon the Corn Products Company appealed the case to the United States supreme court. On the 14th day of April the United States supreme court rendered its decision, which is as follows:

SUPREME COURT OF THE UNITED STATES.

No. 119—October Term, 1918.

CORN PRODUCTS REFINING COMPANY, *Plaintiff in Error*, v. V. C. EDDY, B. J. ALEXANDER, C. H. LERRIGO *et al.*

In error to the Supreme Court of the State of Kansas.

(April 14, 1919.)

Mr. Justice Pitney delivered the opinion of the court.

Plaintiff in error (plaintiff in the original action) is a corporation which manufactures in the state of Illinois a proprietary table syrup composed of 85 per cent corn syrup or glucose, 10 per cent molasses, and 5 per cent sorghum, and sells it under the name of "Mary Jane," in cans labeled as follows:

"5 Pounds Net Weight

MARY JANE

Reg. U. S. Pat. Off.

Mary Jane is guaranteed by Corn Products Refining Co. to comply with the food and drugs act, June 30, 1906. Registered under serial number 2317.

Mary Jane. A Table Syrup Prepared from Corn Syrup, Molasses and Pure Country Sorghum. Contains Sulphur Dioxide.

M'd by Corn Products Refining Co.
General Offices, New York, U. S. A."

Prior to the beginning of the action plaintiff had agents and representatives employed in soliciting orders for this syrup from wholesale merchants in the state of Kansas, the orders being filled by shipping the required quantity of the syrup in interstate commerce in the original sealed cans with original labels attached. Defendants, who are the members of the State Board of Health of Kansas, deeming "Mary Jane" to be misbranded in several particulars within the meaning of the food and drugs law of that state (chap. 266, Kan. Sess. Laws, 1907, as amended by chap. 184, Laws of 1909, embodied in chap. 35, Kan. Gen. Stat. 1909; chap. 32, Kan. Gen. Stat. 1915), and regulations adopted by the Board under authority of that law, notified plaintiff's agents and representatives and other persons selling and dealing in "Mary Jane" syrup that unless plaintiff complied with regulation 6 of the State Board by attaching in a conspicuous place on the outside of each can sold or offered for sale within the state a label with the word "compound" printed upon it, and stating definitely the percentage of each ingredient of which the syrup was composed, they would be arrested and prosecuted. Similar warnings were communicated to wholesale and retail dealers who were and long had been selling this syrup in Kansas under the original brand and label.

Plaintiff brought an equitable action against the members of the Board of Health in one of the district courts of the state, setting up the pertinent facts, alleging that defendants were acting under the authority of the state law and certain regulations adopted by them pursuant to it, and among others regulation 6, requiring that in the case of syrups the principal label should state definitely the percentage of each ingredient in the case of compounds, mixtures, imitations or blends; plaintiff further averring that the state law and the regulations referred to, particularly regulation 6, were void because in conflict with the interstate commerce clause (art. 1, sec. 8) of the constitution of the United States and the act of Congress of June 30, 1906 (ch. 3915, 34 Stat. 768), and also in conflict with the provisions of section 1 of the fourteenth amendment; and that defendants were interfering with plaintiff's interstate commerce and with its lawful business in the state of Kansas, thereby threatening plaintiff with great and irreparable damage; and praying for an injunction.

Their general demurrer having been overruled, defendants answered and the case came on for hearing, with the result that the district court made a finding "that all of the allegations of plaintiff's petition are true," and adjudged that there should be a perpetual injunction restraining defendants from interfering with the sale of "Mary Jane" in the state of Kansas upon the ground that it was misbranded when sold under the label above referred to, and in particular from interfering, because of regulation 6, with persons dealing in or selling the syrup, so branded, within the state.

Upon appeal the supreme court of Kansas reversed the judgment, with direction that the district court enter judgment for the defendants (99 Kan. 63), and the case comes here on writ of error under section 237, judicial code, as amended September 6, 1916 (ch. 448, 39 Stat. 726), upon the contention that the Kansas statute and the regulations adopted by the State Board pursuant to it, as interpreted and applied by the state court of last resort, are repugnant to the interstate commerce clause of the constitution of the United States (art. 1, sec. 8) and to the due process and equal protection provisions of the fourteenth amendment, and especially are in conflict with the Federal food and drugs act.

Upon the argument here, the attack was centered upon the effect of regulation 6, which, so far as pertinent, reads as follows:

"Manufacturers of proprietary foods are required to state upon the label the names and percentages of the materials used, so far as is necessary to secure freedom from adulteration and misbranding: (1) In the case of syrups, the principal label shall state definitely, in conspicuous letters, the percentage of each ingredient, in the case of compounds, mixtures, imitations or blends. When the name of the syrup includes the name of one or more of the ingredients, the preponderating ingredient shall be named first."

It will be convenient to deal first with the contention made under the fourteenth amendment. It is not seriously insisted that there is a denial of the equal protection of the laws, and we see no ground for such a contention. There is no discrimination against plaintiff in error or its product, or against syrups as a class.

It is, however, urged that since plaintiff's syrup is a proprietary food, made under a secret formula and sold under its own distinctive name, and since it contains no deleterious or injurious ingredients, the effect of the regulation in requiring plaintiff to disclose upon the label the ingredients and their proportions amounts to a taking of its property without due process of law. Evidently the purpose of the requirement is to secure freedom from adulteration and misbranding, the mischief of misbranding being that purchasers may be misled with respect to the wholesomeness or food value of the compound; and it is too plain for argument that a manufacturer or vendor has no constitutional right to sell goods without giving to the purchaser fair information of what it is that is being sold. The right of a manufacturer to maintain secrecy as to his compounds and processes must be held subject to the right of the state, in the exercise of its police power and in promotion of fair dealing, to require that the nature of the product be fairly set forth. (*Heath & Milligan Co. v. Worst*, 207 U. S. 338-353; *Savage v. Jones*, 225 U. S. 501, 524; *Standard Stock Food Co. v. Wright*, 225 U. S. 540, 548-549; *Schmidinger v. Chicago*, 226 U. S. 578, 588; *Armour & Co. v. North Dakota*, 240 U. S. 510, 514, 515; *Hutchinson Ice Cream Co. v. Iowa*, 242 U. S. 153, 159; *Hebe Co. v. Shaw*, 248 U. S. 297, 303.)

We turn to the questions raised under the commerce clause and the act of Congress.

Although the supreme court in its opinion said nothing about interstate commerce, it cannot be doubted, in the state of the record, that defendants' activities against which relief was sought included incidental interference with plaintiff's interstate commerce in the "Mary Jane" syrup; and that the general judgment in favor of defendants amounts to an adjudication that the state law and regulations are to be enforced with respect to plaintiff's product indiscriminately, not only when sold and offered for sale in domestic commerce, but also while in the hands of the importing dealers for sale in the original packages, and hence, in contemplation of law, still in the course of commerce from state to state. The silence of the supreme court upon the subject cannot change the result in this regard. In cases of this kind we are concerned not with the characterization or construction of the state law by the state court, nor even with the question whether it has in terms been construed, but solely with the effect and operation of the law as put in force by the state. (*St. Louis S. W. Ry. v. Arkansas*, 235 U. S. 350, 362; *Kansas City Ry. v. Kansas*, 240 U. S. 227, 231; *Mountain Timber Co. v. Washington*, 243 U. S. 219, 237; *Crew Lerick Co. v. Pennsylvania*, 245 U. S. 292, 294.)

The question of repugnancy to the commerce clause may be treated (a) aside from

Federal legislation; and (b) in view of the "food and drugs act" of Congress (June 30, 1906, chap. 3915; 34 Stat. 768).

Upon this question, in both aspects, the judgment under review is clearly sustained by the decision of this court in *Savage v. Jones*, 225 U. S. 501, which is precisely in point. That case raised a question whether a statute of Indiana relating to concentrated commercial feeding stuffs for animals (Acts 1907, chap. 206), which required the packages, when sold or offered for sale, to bear in a conspicuous place a tag or label having plainly printed on it in the English language (among other things) a guaranteed analysis stating the minimum of crude fat and crude protein, determined by a prescribed method, and the ingredients from which the concentrated commercial feeding stuff was compounded, as applied to sales of complainant's products in original packages by importing purchasers, constituted an unwarranted interference with interstate commerce, either independently of or in the light of the food and drugs act of Congress. The court—finding (p. 524) that the evident purpose of the Indiana statute was to prevent fraud and imposition in the sale of food for domestic animals; that its requirements were directed to that end and were not unreasonable; and that it was not aimed at interstate commerce, but without discrimination sought to promote fair dealing in the described articles of food—held (p. 528) that the statute was a lawful exercise of the police power of the state, including the required disclosure of the ingredients contained in feeding stuffs offered for sale in that state and the provision for their inspection and analysis. Upon the question whether there was any conflict with the act of Congress, after pointing out (p. 529) that the object of the latter act was to prevent adulteration and misbranding by prohibiting the introduction into any state from another state of articles of food or drugs adulterated or misbranded within the meaning of the act, and that included in the definition of the term "food" were "all articles used for food, drink, confectionery or condiment by man or other animals, whether simple, mixed or compound"; and (p. 531) that in the enumeration of the acts constituting a violation of the statute Congress had not included (as the Indiana statute did include) a failure to disclose the ingredients of the article, save in specific instances where morphine, opium, cocaine and other substances particularly mentioned were present; and after reciting the provision of the Federal act that an article "for the purposes of this act" shall be deemed misbranded if the package or label bear any statement, design or device regarding it or the ingredients or substances it contains, which shall be false or misleading, the court proceeded to say (p. 532):

"But this does not cover the entire ground. It is one thing to make a false or misleading statement regarding the article or its ingredients, and it may be quite another to give no information as to what the ingredients are. As is well known, products may be sold, and in case of so-called proprietary articles frequently are sold, under trade names which do not reveal the ingredients of the composition, and the proprietors refrain from revealing them. Moreover, in defining what shall be adulteration or misbranding for the purposes of the Federal act, it is provided that mixtures or compounds known as articles of food under their own distinctive names, not taking or imitating the distinctive name of another article, which do not contain 'any added poisonous or deleterious ingredients,' shall not be deemed to be adulterated or misbranded if the name be accompanied on the same label or brand with a statement of the place of manufacture (sec. 8). Congress has thus limited the scope of its prohibitions. It has not included that at which the Indiana statute aims. Can it be said that Congress, nevertheless, has denied to the state, with respect to the feeding stuffs coming from another state and sold in the original packages, the power the state otherwise would have to prevent imposition upon the public by making a reasonable and nondiscriminatory provision for the disclosure of ingredients, and for inspection and analysis? If there be such denial it is not to be found in any express declaration to that effect. Undoubtedly Congress, by virtue of its paramount authority over interstate commerce, might have said that such goods should be free from the incidental effect of a state law enacted for these purposes. But it did not so declare. There is a proviso in the section defining misbranding for the purposes of the act, that 'nothing in this act shall be construed' as requiring manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, 'except in so far as the provisions of this act may require to secure freedom from adulteration or misbranding' (sec. 8). We have already noted the limitations of the provisions referred to; and it is clear that this proviso merely relates to the interpretation of the requirements of the act, and does not enlarge its purview or establish a rule as to matters which lie outside its prohibitions. Is, then, a denial to the state of the exercise of its power for the purposes in question necessarily implied in the Federal statute? For when the question is whether a Federal act overrides a state law, the entire scheme of the statute must of course be considered, and that which needs must be implied is of no less force than that which is expressed. If the purpose of the act cannot otherwise be accomplished—if the operation within its chosen field else must be frustrated and its provisions be refused their natural effect—the state law must yield to the regulation of Congress within the sphere of its delegated power. (Citing cases.) But the intent to supersede the exercise by the state of its police power as to matters not covered by the Federal legislation is not to be inferred from the mere fact that Congress has seen fit to circumscribe its regulation and

to occupy a limited field. In other words, such intent is not to be implied unless the act of Congress, fairly interpreted, is in actual conflict with the law of the state. This principle has had abundant illustration."

And after citing many previous decisions of this court, and analyzing several of them, the opinion proceeds (p. 539):

"Applying these established principles to the present case, no ground appears for denying validity to the statute of Indiana. That state has determined that it is necessary in order to secure proper protection from deception that purchasers of the described feeding stuffs should be suitably informed of what they are buying, and has made reasonable provision for disclosure of ingredients by certificate and label, and for inspection and analysis. The requirements, the enforcement of which the bill seeks to enjoin, are not in any way in conflict with the provisions of the Federal act. They may be sustained without impairing in the slightest degree its operation and effect. There is no question here of conflicting standards or of opposition of state to Federal authority. It follows that the complainant's bill in this aspect of the case was without equity."

An attempt is made to distinguish *Savage v. Jones* upon the ground that the Indiana statute there under consideration covered a field of regulation which had not been included in the Federal statute, whereas, it is said, the Kansas food and drugs law is almost literally a reproduction of the Federal law upon the same subject. It is true that the Kansas statute, *mutatis mutandis*, follows quite closely the lines of the act of Congress, and that its eighth section, which defines the term "misbranded," is almost a copy of the corresponding section of the Federal act; but in the following proviso at the close of the section the words italicized have been inserted by the state legislature, they not appearing in the Federal act: "And provided further, that nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods, which contain no unwholesome ingredients, to disclose their trade formulas, except so far as the provisions of this act, *or the rules and regulations of the State Board of Health*, may require to secure freedom from adulteration or misbranding." These italicized words make a very substantial difference. Section 3 of the Kansas act provides that "The State Board of Health is authorized and directed to make and publish uniform rules and regulations, not in conflict with the laws of this state, for carrying out the provisions of this act"; and under this authority regulation 6 was adopted and published, which required manufacturers of certain proprietary foods, including syrups that are compounds, mixtures or blends, to state definitely upon the principal label the percentage of each ingredient. It is insisted that the regulation goes beyond the authority conferred upon the State Board because it is inconsistent with the definition of "misbranding" contained in the act, and therefore cannot be deemed to be a regulation required to secure freedom from misbranding. Upon this particular point the opinion of the Kansas supreme court is silent; but the decision of the district court upon the demurrer sustained the validity of the regulation as being within the authority of the Board. The supreme court did not overrule this. The question is one of state law, and we must assume that the regulation, having been adopted by the Board and in effect sustained by the decision of the supreme court, is within the authorization of the statute. This being so, it must be treated as an enactment proceeding from the legislative power of the state, and hence it stands upon precisely the same basis as the requirement of the Indiana statute (quoted in 225 U. S. 504 and referred to above) that commercial feeding stuffs should bear a label showing, among other things, a guaranteed analysis stating the minimum percentage of crude fat and crude protein and the ingredients from which the article was compounded. It was because of the absence from the Federal act of a provision requiring the ingredients to be disclosed that this court held that Congress had limited the scope of its prohibitions and had not included that at which the Indiana statute aimed.

The food and drugs act of Congress has not been changed in any material respect from the form it bore when *Savage v. Jones* arose. By act of August 23, 1912 (ch. 352, 37 Stat. 416), and March 3, 1913 (ch. 118, 37 Stat. 732), section 8 has been amended, but not in any manner that affects the present question.

The fact that the Kansas statute, *mutatis mutandis*, follows quite closely the Federal act, and that section 8 defines the term "misbranded" almost in the very words of the corresponding section of the act of Congress, with the significant difference in the final proviso to which we have called attention, is not dispositive of the question whether Congress has covered the field to the exclusion of state regulation. This is to be determined by what the act of Congress omits, not by what it contains, and by considering whether, in words or by necessary implication, Congress has prohibited the states from

making any regulation in respect of the omitted matter. Further argument upon the question is foreclosed by the decision in *Savage v. Jones* that an omission from the act of Congress of a provision requiring feeding stuffs transported in interstate commerce to give affirmative information as to the ingredients of the article amounted to a limitation by Congress of the scope of its prohibitions, and that, although not including that at which the Indiana statute aimed, Congress had not denied to the state, with respect to feeding stuffs coming from another state and sold in original packages, the power to prevent imposition upon the public by making a reasonable and nondiscriminatory provision for the disclosure of ingredients and for inspection and analysis.

That decision is conclusive also upon this point: that the proviso in section 8 of the Federal act, that "nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provision of this act may require to secure freedom from adulteration or misbranding," merely relates to the interpretation of the requirements of the Federal act, and does not enlarge its purview or establish a rule as to matters which lie outside its prohibitions.

Savage v. Jones was decided after elaborate argument and upon full consideration. We see no reason to reconsider the conclusion there reached or to deny to the case its proper authority. Its doctrine was followed and applied in *Sligh v. Kirkwood*, 237 U. S. 52, 61, 62; *Hebe Co. v. Shaw*, 248 U. S. 297, 304.

It is argued that the present case is controlled rather by *McDermott v. Wisconsin*, 228 U. S. 115, 130, and in effect that this case must be taken as overruling *Savage v. Jones*. The contention is unfounded. The authority of the earlier decision was expressly recognized in the opinion of the court in the later, the distinction being placed (pp. 131, 132) upon the question whether the regulations of the state concerning the same subject matter were in conflict with the acts of Congress. The Wisconsin statute was held to be in conflict because it required that packages of food stuffs received through the channels of interstate commerce, bearing labels intended to be in compliance with the act of Congress, while the goods were still unsold and were in the possession of the importer for the purpose of sale and being exposed and offered for sale by him, as a condition of their legitimate sale within the state, should bear the label required by the state law and none other, in effect requiring the label that showed compliance with the act of Congress to be removed from the package before the first sale by the importer and while the goods remained still subject to Federal inspection.

The judgment under review should be affirmed.

The Journal of the American Medical Association, under date of May 24, gave editorial comment on the above decision in part as follows:

"It now becomes a matter of record from the highest court in the land that secret formulas of proprietary foods at least are not the holy and inviolable things that the proprietors thereof would have one believe. Slowly the old order passes. The rights of property, held in the past, by the interpretation of the courts, as paramount to the rights of health, are gradually assuming their proper relation in the scheme of a rational state."

The work of the division has gone forward in about its usual degree of efficiency under the wise direction of the assistant chief inspector, Mr. Rowland, who will make a detailed report of his Division.

On the 9th of June the State Civil Service Commission conducted an examination for the appointment of a food and drug inspector and have certified the following list of eligibles from which recommendation for an appointment should be made: Roy L. Birkett, Reserve, Kan.; Thomas I. Dalton, 613 West Eighth street, Topeka, Kan.; Arthur Evans, Lawrence, Kan.

DIVISION OF CHILD HYGIENE. The work of the Division of Child Hygiene has gone forward under the direction of Doctor DeVilbiss in the same enthusiastic fashion that has characterized former years. The chief of the division during the past year has also acted as state chairman of

child welfare, women's committee, Council of Defense. A vast amount of research and educational work has been accomplished, which is fully set forth in the report of the chief of the division. The educational work carried forward by this division during the past few years cannot but be of inestimable value in the years to come in the instruction of mothers in the rearing and caring for children and the reduction of infant mortality.

On May 24 Doctor DeVilbiss handed me her resignation, which reads as follows:

TOPEKA, May 24, 1919.

S. J. Crumbine, M. D., Secretary State Board of Health, Topeka, Kan.:

DEAR DOCTOR CRUMBINE—I am sorry to ask you to accept my resignation as director of the Division of Child Hygiene. It is my intention to devote my summer to Chautauqua lecturing and the winter to postgraduate studies in public health.

I want to take this opportunity to express my appreciation to the Board for their many courtesies, and to you, personally, for the splendid coöperation and support which we have always had in our work and for the many pleasant relations associated with our department family. Although I am leaving your department officially, yet I will always have the interest of the Division of Child Hygiene at heart, and I want you to feel perfectly free to call on me for any service which I may be able to render.

Cordially yours,

LYDIA ALLEN DEVILBISS.

It is recommended that her resignation be accepted and that her successor be named at this time. I wish to recommend Dr. Florence Sherbon, at present member of the faculty of the University of Kansas, as the new chief of the Division of Child Hygiene.

Doctor Sherbon has had considerable experience in work closely related to the work of the division in Indiana and Iowa, and on several occasions substituted for Doctor DeVilbiss in this division.

DIVISION OF VENEREAL DISEASES. The creation of and the work done in this division has been the direct result of the war and is one of the many compensations of the most disastrous and destructive war in history. I shall not burden this report with details concerning the operation of this division, as that will be fully set forth in the report of the chief, Capt. Millard Knowlton.

I want, however, to put on record my grateful acknowledgment, first, to the government, through the War Department, that Captain Knowlton was detailed to this department to assist in venereal-disease control; and, second, to the captain personally because of his untiring devotion to the task set before him and for his skill and ability in handling this new, if not revolutionary and delicate, problem. It is likely that the captain will sever his immediate connection with the division on July 1, at which time Dr. B. K. Kilbourne will assume the duties of the chief. But it is our sincere hope that in the regional work, to which the captain has been assigned, Kansas may be included in his district, so that we may have his wise and timely help and counsel.

DIVISION OF PUBLIC-HEALTH EDUCATION. It is difficult to separate the work of the public-health education and that of the other divisions, and yet it constitutes, in a way, a separate and tremendously important division of the Board's work. Indeed, in its final analysis, the chief, and perhaps the most important work of any state department of health lies in the education, direction and leading of the people toward and into

ways of right living and wholesome and healthful surroundings, which must be accomplished through means of education.

The public-health car "Warren" has been on the road in its mission of health propaganda during the entire year up until our funds were exhausted the first week in June. It is thought that the personal and immediate contact with the people by visiting them from town to town, where their individual and personal problems may be discussed and consultations with mothers and parents may be secured, must, after all, be one of the most effective of public-health educational measures.

Coupled with this comes the opportunity of rendering specific aid or assistance in individual cases where the personal need is pressingly urgent. It is desired that this work, with all its possibilities, in conjunction with work of public-health supervision through the use of printed pamphlet, bulletin, lecture, stereopticon slides, moving picture, and actual demonstration, will do much good in the days that are to come. It seems to me that the possibilities along this line are unlimited and should receive a generous measure of our individual attention.

GENERAL. In general the outlook for the advancement in public-health work was never so promising as at the present time. The legislature increased our appropriations in a substantial manner, although very materially less than was proposed, the most unfortunate error being that of the omission (said to be unintentional) of the appropriations for the Division of Venereal-disease Control. However, ample appropriation was made for maintenance, treatment and quarantine of venereally infected women at the State Industrial Farm, and it is thought that the department will be thus able to avail itself of the subsidy of the government to those states voting a like sum for venereal-disease control, the amount set aside for Kansas being \$18,385.49.

On June 4 and 5 the Surgeon General met with the state health officers at Washington. On the following two days, the 6th and 7th, the health officers met in annual conference at Atlantic City. These meetings were largely attended, all of the states being represented but four. At the meeting of the state health authorities at Atlantic City a new and definite program was adopted looking forward to state health departments taking an active interest and part in the creation of a unified and coördinated national department or commission of health. To that end the conference appointed an executive committee composed of eleven health officers, and your executive had the misfortune of being named chairman of this committee. Already important matters have been accomplished through this committee, chief of which is that a conference was arranged with the president of the American Red Cross, Doctor Farrand, at which certain disconcerting and antagonistic methods, which are being carried on in most, if not all, of the states, in relation to the appointment of Red Cross public-health nurses in the various counties, was adjudicated and a mutual agreement tentatively arranged. Frequent meetings of the executive committee will be held during the year in conjunction and coöperation with a committee of the American Medical Association looking toward the formulation of legislation in the interest of public health.

Hitherto the state departments of health have been entirely inactive, or at least passive, in the formulation of national public-health policies. It is believed that the time has arrived when the force and influence of the various state departments must be utilized in properly directing the public-health work, lest chaos and confusion of the Federal health activities may result.

PERSONAL. On June 30 my resignation as dean of the University School of Medicine will have become effective. This will give me more time, which is so very greatly needed in conducting the increasingly important work of the department.

Your executive officer has been invited to be an instructor in the school for health officers for the state of Montana, to be held the second week of July. I therefore ask your approval of this mission to Montana. Doctor Sippy is introducing some of the Kansas methods in Montana, one of which is the school for health officers.

PERSONNEL. Under the new fees and salaries law passed by the last legislature proper classification of the personnel will be made, through which increases in salaries will be generally made. It is to be regretted that this increase has not been as much in many cases as should have been, and in a few instances none at all, but there is no appeal from legislative action; therefore we will have to accept the situation.

Altogether I wish to report that the present personnel of the department is of a higher grade, more harmonious and doing better work than has ever obtained in the department hitherto.

Respectfully submitted. S. J. CRUMBINE, *Secretary.*

Minutes of Annual Meeting, 1919.

The annual meeting of the State Board of Health was held in the office of the secretary at Topeka, Kan., June 26, 1919.

On roll call the following members of the Board were present: Dr. J. T. Axtell, president, presiding; and Doctors Coburn, Ewing, Walker, Aldrich, Ernest and Lerrigo.

Minutes of the third quarterly meeting were then read, and upon motion ordered approved and placed on file.

The report of the secretary was then read, and upon motion ordered to be placed on file. Recommendations made in the secretary's report were then taken up for discussion.

Upon motion, the resignation of Dr. Lydia Allen DeVilbiss as director of the Division of Child Hygiene was accepted.

Upon motion, Dr. Florence Sherbon was elected to fill the position of chief for the Division of Child Hygiene for the ensuing year.

Upon motion, the secretary was granted a leave of absence to act as instructor in the school for health officers in the state of Montana.

Upon motion, Thomas I. Dalton was selected from the list of eligibles certified by the State Civil Service Commission for appointment as food and drug inspector and recommended to the secretary for a probationary

appointment of six months, the appointment to become permanent if at the expiration of six months his services as food and drug inspector were satisfactory to the department.

The standards committee then made its report, and upon a free discussion the several members of the Board expressed their opinion to the general effect that regulation 6 of the food and drug law, requiring the labeling of syrups, should, in the face of the United States supreme court's decision, be rigidly enforced.

Upon motion, the following resolution was unanimously approved:

Resolved, That the Food and Drug Laboratories at Lawrence and Manhattan submit to the secretary's office at Topeka, for publication in the monthly *Bulletin*, a report of the preceding month's analytical work, this report to be sent in not later than the 10th of each month.

The secretary was instructed to notify the directors of our Food and Drug Laboratories in accordance herewith.

The acting chief sanitary engineer then made his annual report of the Division of Water and Sewage, which, upon motion, was received and ordered placed on file.

The engineer then presented the following regulation and recommended its approval. Upon a motion, the regulation was unanimously approved, Doctors Axtell, Coburn, Ewing, Walker, Lerrigo, Aldrich and Ernest voting in the affirmative.

The regulation follows

To the Mayor and Council or Commissioners of the City of Mound City, Kan.:

WHEREAS, The city of Mound City, Kan., owns and operates a waterworks system which furnishes water for domestic use to the citizens of the state of Kansas; and

WHEREAS, The water furnished by the said waterworks system has been shown by repeated tests to be grossly contaminated with intestinal bacteria and to be in such condition that it is prejudicial to the public health; and

WHEREAS, The city officials have been notified on numerous occasions by representatives of the State Board of Health of the dangerous character of this water, without any steps being taken by the city officials to remedy the conditions responsible therefor: therefore, be it

Resolved by the Kansas State Board of Health, That the city of Mound City, Kan., is hereby ordered to proceed without delay to make the following improvements to its waterworks system.

First: To clean thoroughly the sand and gravel of the filter bed.

Second: To repair the pumping equipment so that normal operation can be resumed.

Third: To install a wash-water pump or elevated tank so that the filter may be properly washed.

Fourth: To install adequate equipment for sterilizing the water by some approved method.

And it is further ordered that plans and specifications for the above work be submitted to the engineer of the State Board of Health on or before July 15, 1919, and that construction work shall be started on or before August 1, 1919.

The secretary was ordered to transmit a copy of the order to the mayor of the city of Mound City.

Upon motion, regulations 23 and 24, relating to the administration and enforcement of the vital statistics law, were unanimously approved, all the members of the Board voting in the affirmative.

The regulations as passed are as follow:

REGULATION 23.—*Premature Stillbirths.*

For purposes of reporting and issuing of certificates of birth and of death, the term stillbirth shall be applicable to any delivery of a dead infant or fetus, the development of which indicates that it has passed the twenty-eighth week of intrauterine life. Certificates for such births and deaths shall be issued as instructed in regulation 6.

REGULATION 24.—*Certificates to be Written in Ink.*

Certificates of death shall be written plainly in black ink, unless written on typewriter. These certificates are a permanent record. The local registrar shall not issue a burial permit until a legible and satisfactory certificate of death, properly written in ink or on typewriter, is presented.

Certificates of birth shall likewise be legibly written in black ink or on typewriter.

The state registrar, Dr. C. H. Lerrigo, then made his report, which upon motion was received and ordered to be placed on file.

The report of the assistant chief of Division of Foods and Drugs was then read and upon motion was ordered to be received and placed on file.

Professor Bailey, director of the University Food Laboratory, then read the annual report of the activities of the Food Laboratory, which upon motion was ordered to be received and placed on file.

In the absence of Professor Sayre, director of the Drug Laboratory at Lawrence, and Professor King, of the Food Laboratory at Manhattan, Mr. Rowland presented their reports, which upon motion were ordered to be received and placed on file.

The secretary then presented the annual report of the Division of Child Hygiene, by Doctor DeVilbiss, which was ordered to be received and placed on file.

The bacteriologist then presented her annual report, which was ordered to be received and placed on file.

The report of the Division of Venereal Disease was then presented by Captain Knowlton, which upon motion was ordered to be received and placed on file.

Captain Knowlton then presented the following resolutions relating to procedures in the control of certain communicable diseases while in quarantine, which are as follow:

WHEREAS, The maintenance of any institution requires the establishment of orderly arrangements and obedience to rules and regulations; and

WHEREAS, The men held under quarantine at the State Quarantine Camp for Men are detained under authorization of the State Board of Health; and

WHEREAS, The State Board of Health is specifically authorized by chapter 205, Laws of 1917, to make rules, regulations and procedures for the control of communicable diseases:

Be it Resolved by the Kansas State Board of Health, That the following rules and regulations be adopted for the better control of the quarantine camp where men are quarantined for venereal disease:

(1) The camp physician (acting as deputy state health officer) is authorized and directed to prescribe proper treatment for the men under quarantine, such treatment to include suitable work in sufficient amount to maintain the physical wellbeing of the men so detained under quarantine.

(2) The authorities in charge of the camp are authorized to take the men into the penitentiary for their meals, for treatment, for baths and for such other comforts and conveniences as may be better supplied within its walls than within the confines of the camp outside the walls.

(3) The authorities in charge of the camp are also authorized to take such disciplinary measures as may be necessary to maintain order, secure obedience to the rules and regulations of the institution, and to carry out the purposes for which quarantine is maintained.

Upon motion, the regulations and procedures were adopted, the following members of the Board voting in the affirmative: Doctors Axtell, Coburn, Ewing, Walker, Lerrigo, Aldrich and Ernest.

The annual report of the supervisor of public-health nursing was then given by Mrs. Virginia Kimball, state supervisor of nurses, which upon motion was ordered to be received and placed on file.

Captain Knowlton then presented revised rules and regulations for venereal-disease control, and after an extended discussion and appropriate amendments, the following resolutions were unanimously adopted, the following members of the Board voting in the affirmative: Doctors Axtell, Coburn, Ewing, Walker, Lerrigo, Aldrich and Ernest.

The regulations follow:

Rules and Regulations for the Control of Venereal Diseases.

By authority granted under section 10122 and sections 10142 to 10145, both inclusive, General Statutes of 1915, and by the specific direction of the legislature of the state of Kansas under chapter 205, Session Laws of 1917,

Be it resolved by the State Board of Health, in regular annual session at Topeka, on June 26, 1919, That rule 2, part 1, of the rules and regulations for the control and interstate transportation of communicable disease be amended to read as follows:

RULE II.

(a) In addition to the diseases named in rule I, the following are hereby declared to be infectious, contagious or communicable in their nature and are declared to be notifiable diseases dangerous to the public health:

GROUP II.—*Syphilis, Gonococcus Infection, Chancroid.*

(b) Every person who knows or suspects that he or she may be infected with syphilis, gonococcus infection or chancroid shall forthwith place himself or herself under the care and treatment of a legally qualified practitioner of medicine, or shall report to the local or state health officer for examination to determine whether or not such infection exists.

(c) Hereafter each and every physician or other practitioner of the healing art practicing in the state of Kansas, or any other person who treats or examines any person suffering from or afflicted with syphilis, gonococcus infection or chancroid in any of their stages or manifestations, shall report, as hereinafter required, in writing, to the State Board of Health the existence of such diseases: *Provided*, That in cities where ordinances have been adopted which require the reporting of syphilis, gonococcus infection or other venereal disease to the local health officers or boards of health, said local health officers or boards of health shall, within seven (7) days after the receipt by them of the reports of cases of the diseases herein named, forward by mail to the State Board of Health the original written reports made by persons required to make such reports, after first having transcribed the information given in the respective reports in a book or other form of record for the permanent files of the local health office. Said permanent record or file shall be a confidential record and open to public inspection only in so far as is necessary for the protection of the public health and the enforcement of the provisions of state laws, the regulations of the State Board of Health and of local city ordinances.

(d) All such reports shall be made in writing within forty-eight hours after diagnosis, on blank forms supplied or approved by the State Board of Health, and shall give the number of the case, which number shall correspond with the serial number of the circular of instructions given to the patient; the name and address of the patient as hereinafter required; the type or stage of such disease; the source of infection; the color, the sex, the marital state and the occupation of the person afflicted with the disease; and a statement as to whether or not the nature of the occupation or place of employment of the person afflicted with such disease makes him or her a menace to the health of any other person or persons: *Provided*, That whenever the physician making a report will assume full responsibility for such conduct of the person afflicted with any of these diseases as will prevent the transmission of infection to others, and except in cities where local ordinances otherwise require, nothing in this paragraph shall be construed to require the reporting of the name and address of a person afflicted with syphilis, gonococcus infection or chancroid as aforesaid, unless such person shall fail to report for treatment at the time appointed or for seven (7) days thereafter. In the event that the person making a report is unwilling to assume such responsibility, or shall know or suspect that a person having syphilis, gonococcus infection or chancroid is conducting or about to conduct himself or herself in such manner as to expose other persons to such infection, he shall then report the name and address of such afflicted person, together with such other essential facts as may be required by the State Board of Health.

(e) Any person under treatment for venereal disease who may suspect an incorrect diagnosis or an undue prolongation of treatment, or who may be threatened that his identity will be revealed if he discontinues treatment, may apply to the State Board of Health for information and advice.

(f) It shall be the duty of each and every physician or other practitioner of the healing art practicing in the state of Kansas, or any other person who visits, attends, advises professionally, prescribes for or renders medical or surgical assistance to, or is consulted for medical advice by any person having syphilis, gonococcus infection or chancroid as aforesaid, to at once give to such person a serially numbered circular of instructions furnished or approved by the State Board of Health, entitled, "Instructions for preventing the transmission of gonorrhoea (or syphilis and chancroid)," and to report such fact in writing in the report to be made of such cases.

(g) In any city where druggists are required by ordinance to report sales of venereal-disease remedies to the local health officer, such local health officer shall transmit such reports to the State Board of Health after having made a record of the same in the same manner as reports of cases by physicians are recorded and transmitted.

Be it also resolved, That rule XXXIV, part II, of said rules and regulations, be amended to read as follows:

RULE XXXIV.

Syphilis, Gonococcus Infection or Chancroid.

(a) *Public baths and barber shops.* No person suffering from syphilis, gonococcus infection or chancroid shall apply for service, be served or employed in a public bathroom or swimming pool in the state, and no person suffering from syphilis in a communicable form shall apply for service or be served in any barber shop, nor shall any person suffering from syphilis in a communicable form, gonococcus infection or chancroid be employed or permitted to perform any service in any barber shop.

(b) *Occupations forbidden to persons infected with syphilis, gonococcus infection or chancroid.* No person infected with syphilis in communicable form shall engage in the occupation of nurse, nursemaid, domestic servant, barber, hairdresser, chiropodist, manicure, bath attendant, masseur, or any other occupation in which syphilitic infection may be transmitted to others. No person infected with syphilis in communicable form or gonococcus infection shall engage in any occupation which involves intimate contact with children. No person infected with syphilis in communicable form, gonococcus infection or chancroid shall engage in any occupation which involves the preparation, handling, serving or dispensing by the infected person of foods, drugs or beverages intended for the use of others.

Be it also resolved, That part II of said rules and regulations be further amended by adding rules XXXV and XXXVI, as follow:

RULE XXXV.

Travel or Change of Residence by Persons Infected with Syphilis, Gonococcus Infection or Chancroid Prohibited unless Authorized by Health Officer.

(a) No person infected with syphilis in communicable form, gonococcus infection or chancroid shall enter the state of Kansas or take up residence within the state except upon a permit in writing issued by the secretary of the State Board of Health or his duly authorized representative. The permit shall state that, in the opinion of the issuing officer, the proposed travel or change of residence is not dangerous to the public health. Such permits granted to residents of other states shall be transmitted through the state or local health officer having jurisdiction at the place of residence, or when this is impracticable, copies shall be mailed to the said state or local health officer.

(b) No person infected with syphilis in communicable form, gonococcus infection or chancroid shall travel from one health jurisdiction to another within the state, or from one community to another within the same health jurisdiction, except upon a permit in writing granted by the local health officer under whose jurisdiction such person resides. The permit shall state that, in the opinion of the health officer, the proposed travel is not dangerous to public health.

(c) No person infected with syphilis in communicable form, gonococcus infection or chancroid shall change residence from one health jurisdiction to another within the state, or from one community to another within the same local health jurisdiction, except upon a permit in writing from the local health officer of the jurisdiction from which such person proposes to move. An applicant for a permit to change residence from one health jurisdiction to another shall inform the health officer to whom application is made as to the intended place of residence and shall agree, in writing, to report in person to the proper health officer within one week after arrival at the new place of residence.

It shall be the duty of the health officer who issues a permit for change of residence to another jurisdiction to promptly notify the health officer under whose jurisdiction the infected person proposes to enter, that such a permit has been issued. This notice shall contain the name and address of the infected person.

Upon receiving such notice any health officer shall ascertain and report the arrival of such infected person to the health officer who issued the permit for change of residence, and shall also notify the State Board of Health that such change of residence has taken place.

(d) Each application for a permit to travel or change residence must contain an agreement signed by the applicant to continue treatment under the direction of a legally licensed physician until permission to discontinue treatment has been received from the health officer. No health officer shall permit the discontinuance of treatment under such conditions until the infected person has become noninfectious according to the standards fixed by the State Board of Health.

RULE XXXVI.

Rules and Regulations for the Control and Suppression of Syphilis, Gonococcus Infection and Chancroid.

SECTION 1. Local county and city health officers throughout the state, and deputy state health officers appointed for that purpose, are hereby authorized and directed to use every available means to ascertain the existence of and immediately investigate all suspected cases of syphilis in communicable form, gonococcus infection or chancroid within their respective jurisdictions, and to ascertain the source of such infections.

SEC. 2. In such investigations said local health officers, deputy state health officers, or their duly authorized representatives, are hereby vested with full powers of inspection, examination, isolation and disinfection of all places, persons and things, and as such inspectors said local health officers, deputy state health officers or their duly authorized representatives, are hereby authorized:

(a) To make examinations of all persons reasonably suspected of having syphilis in communicable form, gonococcus infection or chancroid. Owing to the prevalence of such diseases among pimps and prostitutes, all such persons may be considered in the above class.

(b) To isolate such persons whenever in the opinion of said local health officer, deputy state health officer, the State Board of Health or its secretary, isolation is necessary to protect the public health. In establishing isolation the health officer shall define the place and the limits of the area in which the persons reasonably suspected or known to have syphilis, gonococcus infection or chancroid and his or her attendant, are to be isolated, and no persons, other than the attending physicians, shall enter or leave the area of isolation without the permission of the health officer having jurisdiction: *Provided*, That women may be quarantined at the Kansas State Quarantine Hospital for Women at Lansing, and men may be quarantined in the Kansas State Quarantine Camp for Men at Lansing: *Provided further*, That in any case where quarantine for venereal disease is contemplated or ordered after an examination or examinations by the health officer, the infected person may appeal to the local board of health in writing for another examination or examinations to confirm the diagnosis. The local board of health may require the person making such appeal to pay the cost thereof, and to deposit with the written appeal a sum not exceeding \$10 for that purpose. Upon receipt of such written appeal, accompanied by the required fee to cover the cost of such examination, the local board of health shall appoint another physician to consult with and assist the health officer in making such additional examination or examinations as may be necessary to reach an agreement as to diagnosis. Specimens for laboratory tests taken in the additional examination or examinations shall be sent to the state laboratory.

(c) In cases of quarantine or isolation, not to terminate said quarantine or isolation until the cases have become noninfectious or until permission has been given by the health officer having jurisdiction: *Provided*, That power to release from quarantine at the Kansas State Quarantine Hospital for Women or the State Quarantine Camp for Men at Lansing shall be vested in a deputy state health officer, to be designated by the secretary of the State Board of Health.

Cases of gonococcus infection are to be regarded as infectious until at least three successive smears, taken not less than five (5) days apart, fail to show gonococci. Smears taken for examination for release shall not be taken for at least forty-eight (48) hours following last local treatment nor immediately following urination.

Cases of syphilis are to be regarded as infectious until all lesions of skin or mucous membranes are completely healed.

(d) Inasmuch as prostitution is the most prolific source of syphilis, gonococcus infection and chancroid, said local health officers and their duly authorized representatives are authorized and directed to use every proper means to aid in suppressing the same, and not to issue certificates of freedom from venereal disease, as such certificates may be used for the purpose of solicitation.

(e) Keep all records pertaining to said inspections and examinations in files not open to public inspection, and to make every reasonable effort, consistent with the protection of the public health, to keep secret the identity of those affected by venereal-disease control measures.

Be it also resolved, That part 6 of said rules and regulations be amended by adding thereto rule XXI, which shall read as follows:

RULE XXI.

No common carrier, or owner, driver or operator of a public or private conveyance, shall bring into the state or receive for transportation from one point to another within the state any person infected with syphilis in communicable form, gonococcus infection or chancroid, unless such person shall have a permit as required by the rules and regulations of the State Board of Health.

Upon motion, official procedure for handling venereal-disease reports and matters relating thereto was unanimously adopted, the following members voting in the affirmative: Doctors Axtell, Cobury, Ewing, Walker, Lerrigo, Aldrich and Ernest.

The procedure follows:

Official Procedure for Handling Venereal-disease Reports.

By authority granted in chapter 205, Session Laws 1917, to make and prescribe rules, regulations and procedures for the isolation and quarantine of persons afflicted with communicable diseases,

Be it resolved by the Kansas State Board of Health, at its annual meeting held in Topeka, June 26, 1919, That the procedure outlined in the articles of instruction appended hereto be adopted as the official procedure to be followed by all local health officers of the state when information reaches them concerning the existence of a case of venereal disease, and that all local health officers be and the same are hereby directed to follow this procedure and investigate all information received concerning the existence of cases of venereal disease and take appropriate action in each case to protect the public health.

1. When a duly qualified physician reports a case of venereal disease by number and withholds the name of the patient, it is understood that the physician accepts responsibility for the conduct of the patient, and the health officer should transmit the reports to the State Board of Health. Should information reach the health officer, through channels other than the physician's report, that the conduct of a patient whose case has been reported by number is such as to expose others to infection, it is the duty of the health officer to take appropriate action to protect the public health, even though such action should require the quarantine of such infected person.

2. When the names and addresses of persons infected with venereal disease are reported by physicians, the procedure adopted should be such as will extend every proper courtesy to the physician making the report, duly respect the confidential nature of the information, and adequately protect the public health. Should the report be made direct to the local health officer, it is advisable to see the physician personally, if practicable, and get all the information possible as to the character of such infected person and the likelihood that the patient's conduct may be such as might spread the disease to others.

3. After a talk with the attending physician, if an interview with the patient is deemed necessary, a *private* interview should be sought at the earliest opportunity. The purpose of the interview should be disclosed to no one except the patient. The provisions of the state regulations and local ordinance, if any has been passed, should be carefully explained so that the patient may fully appreciate the powers which the health officer may exercise under such regulations. It is probable that a plain talk of this kind, in which the patient is given to understand that he must follow instructions or he may be placed under quarantine by the health officer, will be sufficient to deter him from exposing others. If not, in order to protect the public health, it is the duty of the health officer to institute quarantine without delay.

4. When the persons whose names are reported are known to be prostitutes or pimps, or to be engaged in any way in commercialized vice, it may be assumed that such persons cannot be trusted to protect others from exposure to infection, and it is the duty of the health officer to take immediate steps to quarantine them without waiting to interview either the physician or the patient. In all other cases where quarantine is instituted the health officer will wish to satisfy himself as to the accuracy of the diagnosis.

5. Before deciding to quarantine a person infected with venereal disease the health officer should study the facts in the case to determine the best method of handling the individual case. It is not desired to place the expense of maintaining and treating such persons for a considerable period upon the public unless such step is necessary to protect the public health. On the other hand, it is highly desirable that every person infected with venereal disease, who is a menace to the public health while at liberty, should be placed in quarantine.

6. The health officer should examine promptly and thoroughly, by both clinical and laboratory methods, all persons referred by peace officers as suspected of having venereal disease, and take appropriate action to protect the public health in all cases found to be infected.

7. An official inquiry concerning all persons reported by druggists as having purchased drugs for the treatment of venereal disease should be promptly made by the health officer or his representative, to determine if the reported person is conducting himself or herself in a manner prejudicial to the public health. Measures for the treatment or quarantine of such individuals should be conditioned upon the results of such inquiry.

In no case should the health officer himself treat such persons for pay, as this will cause his motives to be suspected.

8. In many instances such persons may submit to an examination by the health officer, or other physician under whose professional care they may choose to place themselves, without the necessity for having them apprehended by peace officers. Such procedure is preferable where practicable, as it is less likely to attract attention and result in publicity.

9. When there is reason to believe that a person is a menace to the public health such persons may be apprehended by a peace officer upon an order issued by a health officer. Such an order constitutes the authority of the peace officer for detaining the suspected person until the medical examination has been completed.

10. When a health officer orders persons placed in quarantine for venereal disease at the State Quarantine Hospital for Women or in the State Quarantine Camp for Men the actual transfer to the place of quarantine is made by a peace officer. A quarantine order issued by the health officer authorizes both transfer to place of quarantine and detention under quarantine till the patient may be released as noninfectious.

11. All reports of venereal disease are required to be confidential, and all administrative measures for the control of venereal diseases should be carried out with as little publicity as possible. Publicity may be most embarrassing to innocent members of the family.

12. Information concerning the presence of venereal disease may often reach the health officer through channels other than official. Private citizens or representatives of certain societies or civic organizations may report cases, and it is the duty of the health officer to carefully investigate all cases so reported. Should the investigation furnish evidence of infection that seems sufficient, the health officer should either persuade the suspected persons to submit to an examination or issue a "pick-up order" to be served by a peace officer. All cases should be dealt with in a manner that will best safeguard the public health.

13. When persons who have previously been quarantined for venereal disease become reinfected it is advisable to have them sent to Lansing under court sentence if the evidence will warrant such procedure, as the period of detention is apt to be longer under court sentence than under quarantine. It is the duty of all health officers to coöperate fully with the courts and with peace officers in the repression of prostitution, which is recognized as the most prolific source of venereal disease.

14. It is sometimes necessary to deal with young girls who are infected with venereal disease. These cases are usually such as need training in the Girls' Industrial School at Beloit. Girls will not be admitted to this school while infected with venereal disease. It is deemed advisable to have such cases sentenced to Beloit by the judge of the probate court and sentence suspended during the period of quarantine at Lansing. The health officer will then issue a quarantine order and the patient will be taken to the Farm at Lansing in the usual way. At the same time the superintendent of the Farm should be notified that the girl is under sentence to Beloit and the transfer to that institution may be made as soon as the patient becomes noninfectious.

The annual election of officers was then held, which resulted as follows:

President, Dr. C. E. Coburn, Kansas City.

Vice President, Dr. H. L. Aldrich, Caney.

Epidemiologist, Dr. T. D. Tuttle, Topeka.

Chief of Division of Venereal Disease, Dr. B. K. Kilbourne, Topeka.

State registrar, Dr. C. H. Lerrigo, for a period of four years from July 1.

Sanitary engineer, C. A. Haskins.

Assistants to engineer, F. M. Veatch and W. A. Burton.

Bacteriologist, Dr. Sara Greenfield.

Conferees, F. L. Tilford, Wichita; Frank Rushton, Rosedale; J. A. Kimball, Salina.

The following bills were audited and allowed:

Mr. E. H. S. Bailey.....	\$2.30
Dr. O. D. Walker.....	20.97
Dr. Clay E. Coburn.....	9.00
Dr. W. M. Earnest.....	12.94
Dr. J. T. Axtell.....	15.27
Dr. H. L. Aldrich.....	25.15
Mr. J. F. Tilford.....	20.71
Dr. C. H. Ewing.....	25.95

No other business appearing, the Board, upon motion, adjourned.

Respectfully submitted. S. J. CRUMBINE, M. D., *Secretary.*

FIRST QUARTERLY MEETING, 1919.

Held in the office of the Secretary, Topeka, Kan., October 18, 1919.

Report of the Secretary.

To the Members of the State Board of Health:

Since the annual meeting in June the state has been particularly free from epidemic disease. This is reflected in the death rate for the months of June, July and August, as compared with the same months last year, in which we find there were 761 less deaths this year than last year for these three summer months. The incidence of typhoid fever throughout the state has been markedly less than for many years, and altogether the state has reason to congratulate itself upon a lower morbidity and mortality, particularly in view of the awful toll of human life that occurred last fall and last winter during the epidemic of influenza.

INFLUENZA. Extensive preparations for the possible recurrence of the influenza epidemic have been taken by the department through the issuance of circular letters to local health officers and boards of county commissioners, as per attached copies. There are now listed with the department eighty-six volunteer physicians and thirty-eight volunteer nurses, who have signified their willingness to serve in case they are needed in another epidemic.

TOPEKA, KAN., August 6, 1919.

To the Boards of County Commissioners:

GENTLEMEN—The State Board of Health wishes to invite your attention to a matter of the gravest importance effecting the life and health of the citizens of your county. While we do not wish to create unnecessary alarm, nor do we wish to pose as a prophet to the end that we can foretell the occurrence of events in the future, yet if we are to judge from the history of other epidemics of influenza we will in all probability have a recurrence of this serious disease in Kansas sometime this fall or winter. I would, therefore, admonish you to prepare for such an eventuality, to the end that we may not be left in a helpless situation should our community become overwhelmed with the epidemic as it was last year.

The legislature failed to make any state appropriation to assist in providing emergency facilities in the nature of medical supplies, nurses and medical personnel. It was, therefore, left to each community to provide ways and means from its own resources. It is strongly urged that each county having a population of less than 10,000 vote at least \$2,000 as an emergency fund; that counties having a population between 10,000 and 20,000 vote a fund of \$4,000; counties having a population between 20,000 and 30,000 vote a sum of \$5,000; counties having a population between 30,000 and 40,000 vote a fund of \$6,500; and those having a population of over 40,000 vote a fund of \$10,000.

This fund is not to be used for any other purpose than that of an emergency to meet unusual and extreme conditions:

First: For the operation, maintenance and conduct of emergency hospitals.

Second: For emergency nurses.

Third: For emergency medical personnel.

Fourth: For the purchase of such vaccines as may be recommended by the State Board of Health for free vaccination.

The State Board of Health has a list of volunteer nurses and doctors who have agreed to respond to emergency call when such call is issued by the officials in any municipality or county in the state, the payments for such services being those fixed by the United States Public Health Service during the last epidemic.

As a preliminary, options should be secured on such suitable building or buildings, if none are already available, for the purpose of an emergency hospital and a complete program of emergency aid worked out with your county and municipal boards of health in coöperation with the local Red Cross organization.

It is desired that the action of your board and a copy of the program, when completed, be transmitted without unnecessary delay to the state department of health. May I urge upon your honorable board that this letter is not a mere formality but a call to service as well as a warning to be prepared. The State Department of Health may not be held to account if communities do not make the necessary preparation to meet a grave emergency.

Respectfully.

S. J. CRUMBINE, M. D., *Secretary.*

TOPEKA, August 9, 1919.

Honorable Board of County Commissioners:

GENTLEMEN—History of various outbreaks of influenza, with which the world has been confronted, indicates that we must anticipate an outbreak of this disease of greater or less severity during the coming winter. Judging from the virulence of the outbreak last year, we must anticipate a severe outbreak this year. It is necessary that we be prepared to meet this emergency, not only in the matter of taking care of those afflicted, but in the matter of making every effort possible to prevent the spread of the disease.

I therefore wish to respectfully invite your attention to the importance of making arrangements with your county health officer to see that every case of influenza is thoroughly quarantined, and not only to see that it is quarantined, but to see that the quarantine measures are strictly enforced.

Should a severe epidemic occur this work will take absolutely all of the health officer's time, and if the spread of the disease is to be prevented, or even retarded, it is necessary that he devote such time strictly to health-officer work.

I wish to further respectfully invite your attention to the fact that the law constitutes the members of the county commissioners as a county board of health and requires them as such to see that the laws of the state, which include the regulations of the State Board of Health, are enforced within their county.

We will appreciate it if you will send us a copy of the minutes of your meeting showing what action you take in this matter.

Respectfully submitted.

T. D. TUTTLE, M. D., *Epidemiologist.*

TOPEKA, September 16, 1919.

County Health Officer:

DEAR DOCTOR—This department is anxious to get, for immediate use, the names and addresses of all physicians who have returned from army service, whether in this country or overseas.

Will you please send me a list showing *names and addresses* of all in your section?

This information is desired for special use of the United States Public Health Service and is so important that I urge you to reply by return mail, using the enclosed franked envelope.

Respectfully,

S. J. CRUMBINE, M. D.,

Collaborating Epidemiologist, U. S. P. H. S.

TOPEKA, September 30, 1919.

DEAR DOCTOR—During the epidemic of influenza last winter there were many communities absolutely lacking in medical attendance. In collaboration with the United States Public Health Service, we tried to remedy this by securing a list of doctors willing to help where needed.

This year, as a matter of preparation, we are asked to secure a similar list of physicians willing to be at the call of the United States Public Health Service for special duty in influenza cases, it being understood that they are to be used in this state, and as far as possible in their own community. The terms are \$200 per month salary, plus \$4 per diem subsistence, and actual traveling expenses.

In last year's pandemic there was terrible need of physicians for this service. Kansas doctors responded, to the best of their ability, to our call for help. So many men were absent in army or navy service, however, that the response was necessarily limited. Now that you younger men have come back again to home fields, we expect to be better supplied.

Please let us know by return mail if we may put your name on our list of volunteers to fight influenza under the conditions and terms named above.

Fraternally, S. J. CRUMBINE, M. D.,
Collaborating Epidemiologist, U. S. P. H. S.

Similarly, the United States Public Health Service has made extensive preparations in listing personnel of physicians and nurses and broadcasting an extensive propaganda of education.

The September *Bulletin* of the State Board of Health is devoted entirely to the subject of influenza, which, it is trusted, will be an important factor in our defensive preparations.

Your secretary sent Prof. N. P. Sherwood to Rochester, Minn., for the purpose of a second time investigating the work of Doctor Rosenow in preparation of prophylactic vaccines for influenza and its complications. His report is appended hereto as a part of the secretary's report:

LAWRENCE, September 19, 1919.

Dr. S. J. Crumbine, Secretary State Board of Health, Topeka, Kan.:

MY DEAR DOCTOR CRUMBINE—I regret very much not being able to see you personally and talk over the work of influenza. In accordance with your directions, I planned the trip to Rochester for early in August, but received word from Doctor Rosenow that he was away on a vacation and would not return until the latter part of August. Accordingly I found it necessary to postpone my trip until Doctor Rosenow returned. I spent several days with Doctor Rosenow and went over the work very carefully and familiarized myself with the technique which he uses for the preparation of his vaccines. I beg to make the following report:

First. That he has decided to use the lipo-vaccine entirely. His technique used in preparing his lipo-vaccine is much simpler than the army method and seems to be very efficient. Vaccines that have stood for months were easily emulsified and showed no clumping. The advantage of the lipo-vaccine, as he sees it, will necessitate the use of one injection only, which saves time from the standpoint of the physician, and also probably immunize more rapidly.

Second. The Mayos have decided not to manufacture any vaccine for influenza this year. They feel that that undertaking will be entirely too expensive, as they would be unable to limit the distribution of the vaccine to any one district, and hence would have the whole United States to supply.

Third. Doctor Rosenow frankly stated that he felt that while the influenza vaccine was as yet in the experimental stage, that extensive use of it this fall would show better results than he obtained last year, since earlier administration of the vaccine could be carried out than was possible during the epidemic last year.

Fourth. Doctor Rosenow said, when asked as to the efficiency of the influenza vaccine, that he felt certain that his data showed that there was three times more influenza among unvaccinated as among vaccinated, and that there were five times as many deaths among unvaccinated as among vaccinated individuals.

Fifth. Doctor Rosenow strongly emphasizes the necessity of using the strains of organisms found in the respiratory tract associated with the epidemic of influenza. He feels that stock strains or strains from areas distant to the epidemic will not give satisfactory results. He advises the same formula for the vaccine as I mentioned in my previous report; that is, he uses 40 per cent type 1, 2 and 3 pneumococci; 30 per cent type 4, which is synonymous with him for green streptococci; and the balance of the vaccine contains staphylococci and hemolytic streptococci. According to this, then, if vaccines are to be used they should be prepared from cultures isolated from the very beginning of the epidemic.

Sixth. Both Doctor Rosenow and the Mayos themselves are strongly urging that the state boards of health complete the work which he has started and manufacture and use

these vaccines extensively, with the expectation that beneficial results will be obtained and that Doctor Rosenow's contentions will be sustained.

Seventh. Doctor Rosenow estimates the cost of production of the lipo-vaccine for the state of Kansas at somewhere around \$20,000 to \$25,000. He estimates that a force of four bacteriologists, and six assistants to take care of media making, packing, sterilizing, shipping, etc., as well as one stenographer to handle the correspondence, would be necessary. The oil used in the preparation of the vaccine is cottonseed oil of high quality, which he estimates would cost in the neighborhood of from \$2,000 to \$3,000.

One reason for the expense in the preparation of Rosenow vaccines is the difficulty of growth encountered in getting enough organisms to use in the vaccine. Vaccines such as typhoid, etc., could be made on a larger scale, very much cheaper, indeed, than the Rosenow vaccine. So that if anyone should raise the question to you as to the comparison between the expense of preparation as suggested by Rosenow and the cost of production of such simple vaccines as typhoid, it might be well to point out that these are practically autogenous, and the vaccine is composed of organisms grown with difficulty.

I talked the matter over with Dr. H. Gideon Wells, of Chicago, and with Dr. Ludwig Hektoen, of Chicago. They both expressed themselves as feeling that Doctor Rosenow was decidedly too optimistic about the results of his vaccine. Doctor Hektoen told me that he had gone over the matter very carefully, and that while he was not speaking for publication, yet privately he would say that he could not be convinced that results were even as high as Rosenow claimed.

Doctor Rosenow is of the opinion that a certain green streptococci is the cause of influenza, but says that he realized that it may be he is in the wrong. After going over the data with Doctor Rosenow, I felt convinced that he seemed warranted in making claim for some value to his vaccine. However, I feel that the ratio of five to one in mortality is not an accurate one, or that the ratio of three to one in incidence is hardly accurate. All of the errors were on the side of increasing the apparent efficiency of the vaccine. Practically all of his reports are from men favorable to the use of vaccine in general. Many of these men have merely estimated what seemed to them to be percentage of both mortality and incidence compared between vaccinated and unvaccinated. Their tendency for error, as you could see, would be in favor of vaccine. Practically none of them knew how many patients they really had, and very few of them had records of any consequence. Furthermore, you would probably expect a smaller mortality among individuals who are sufficiently interested to consult with their physician relative to being vaccinated. They were all given careful advice, so Doctor Rosenow feels, relative to procedure in case influenza occurred, that the physician had more influence over these vaccinated people, and perhaps persuaded them to go to bed sooner, than those individuals who were stubborn or disinterested in the vaccination. In spite of this, however, I can not help feeling there is a percentage in favor of vaccination. I feel that it probably is larger in the mortality figures rather than in incidence. Just what size percentage I can not say, but perhaps would guess that the ratio should be nearer two to one than five to one. Doctor Rosenow has ample precedent for his work in vaccination against pneumonia. The British government in Africa and the United States army in the United States found that pneumococci vaccines were of greater value—highly efficient in preventing lobar pneumonia preceding the occurrence of influenza. The disease itself seems to markedly lower the efficiency of vaccines against pneumonia. This, Rosenow feels, is because pneumonias in influenza are due to hemolytic and green streptococci.

Anything which the department of bacteriology can do to coöperate with you in any influenza work which may come up, I assure you we shall be glad indeed to coöperate. In case some smaller district would like to try out the Rosenow vaccine, it might be possible for us to make up the saline-suspension type of vaccine for them without very much cost to the state. I have two men, each working half time, that I have hired for work, paying them out of the state food money, and their services would be available; and possibly a little additional fund might be necessary for expenses, etc.

If there is anything further I can give you in regard to this influenza vaccine I should be very glad to attempt an answer to your questions. Thanking you for your confidence and previous coöperation, I beg to remain

Yours respectfully,

NOBLE P. SHERWOOD.

Extensive investigations made by various workers seem to attach great importance to hand-to-mouth infection as one of the principal factors in the transmission of influenza and its complications. This is notably true of the research work made by Colonel Cummings, of the United States army. It would seem the part of sanitary wisdom that every effort should be made to safeguard the public from hand-to-mouth infection. It is, therefore, recommended that the Board enact a regulation requiring actual sterilization of all eating or drinking utensils used in public places for the service of the public, that comes in actual contact with the mouth. Probably no other action taken by the Board would be so fruitful of results as the enactment and enforcement of such a regulation. This would apply not only to influenza, but to all of those communicable diseases the dissemination of which are through the upper respiratory tract.

The American Red Cross is also making very extensive preparations in every county in the United States to supplement the work of the United States Public Health Service and the state and local departments of health in preparedness for an influenza epidemic. A liaison officer is to be placed in each state department of health, through whom intimate contact may be made with the great organization of the American Red Cross. Nurses, hospital supplies, motor service and other methods of relief and assistance will be fully supplied by the Red Cross to those communities that are unable to provide these organizations for themselves.

LABORATORIES. While the work of the department has developed and progressed in a rather remarkable manner during the past fifteen years, so far as the creation of various divisions and the inauguration of definite work relative thereto is concerned, yet in the matter of diagnostic laboratories we have progressed but slowly, until now we find that our facilities are entirely inadequate to meet the rapidly increasing demand for laboratory work in the diagnosis and suppression of disease. It would seem to be the part of wisdom to consolidate our medical laboratories and have them stationed at a place that might be most available and at the same time can receive the most generous support by the state. It is, therefore, recommended that the question of laboratory reorganization receive your most earnest and careful consideration.

THE NATURAL WATERS OF THE STATE. The rapid development of the oil fields of central Kansas gives occasion for serious apprehension as to the possibility of the gross pollution of the natural waters of the state from oil-well wastes, which may seriously contaminate the water supplies of many of our most populous cities of central and southeast Kansas.

Then, too, the question of further purification of sewage of a number of our cities situated on the Neosho and Verdigris rivers should have earnest consideration. It is, therefore, recommended that a committee of two members of the Board be appointed, who, together with the engineer and the secretary of the Board, shall make a personal visitation and careful inspection of conditions in the oil-producing territory and of the sewerage systems of the city of Emporia and such other cities on

the Neosho, Cottonwood and Verdigris rivers as may seem to be necessary, and to make their recommendations at the next meeting of the State Board of Health.

MATERNITY HOSPITALS AND CHILDREN'S HOMES. The last legislature passed a law requiring the inspection and licensing of all children's homes and maternity hospitals in the state, the inspection provision being delegated to the Division of Child Hygiene of the State Board of Health. The director of this division has been making inspections of these institutions, of which she will make a report.

It is recommended that the blank forms which have been prepared for inspection purposes be approved, and that the revocation of license of the Mrs. Blakeman Home, of Wichita, be likewise approved. The director of the division will make a report of her work in relation to this new law.

EDUCATIONAL. The task of entering upon an educational campaign relating to the control of venereal disease and social hygiene, particularly as related to the high schools of the state, is one that is being urged by the United States Public Health Service and which this department has had under consideration for a considerable length of time. Indeed, last spring, before the closing of the schools, considerable work had been done in the high schools by a selected group of lecturers, working under the direction of the boys' secretary of the state Y. M. C. A.

It is desired that the Board express themselves as to how this work might best be continued and their idea of the methods of education among the high-school children in the state.

WORK OF DIVISIONS. The work of the various divisions of the State Board of Health is proceeding with entire satisfaction. It was thought that inasmuch as there are no special matters to report, the chiefs of divisions need not be called upon to make a report at this quarterly meeting.

THE PUBLIC HEALTH PROGRAM OF THE AMERICAN RED CROSS. Very soon after the signing of the armistice the American Red Cross made it clear that the central feature of its peace-time program would consist of activities in the field of public health. An extension of its endeavors in this direction had come to be taken for granted and was generally regarded as appropriate to the history, traditions and actual achievements of the Red Cross in this country and abroad, both before and during the war. A large part of the recent work of the Red Cross in Europe, whether in the military or the civilian area, was fundamentally concerned with health problems. The mobilization and operation of military hospitals, the fight against tuberculosis and other diseases, and the manifold services to refugees and the civilian population had their dominating motive in the care of the sick and injured and the prevention of disease. At home, with its medical and nursing services, its classes in elementary hygiene, dietetics, and care of the sick, its first-aid work, its magazine and publicity machinery, as well as in the conduct of disaster relief operations and the notable development of family welfare work through its home-service department—with all these activities bearing directly

or indirectly upon some aspect of the fundamental health problem, the Red Cross had a foundation of interest and experience upon which it could base an even more comprehensive and united program of community action against the ever-present menace of disease.

On the other hand, with its highly developed machinery of volunteer workers, with its thousands of chapters, branches and auxiliaries, supplied with all necessary guidance from national and divisional headquarters, and constituting a sound fabric of nation-wide local organization to meet community health and welfare needs, the Red Cross could offer exceptional resources of auxiliary service to the public-health authorities and to the established volunteer health agencies. Entrance upon a public-health program was therefore a consistent evolution from the past and by no means a radical departure in Red Cross policy.

A PROGRAM OF COÖPERATION But in planning thus definitely to enter the field of public health, the Red Cross has no thought of attempting either to encroach upon the field of the national, state or local health authorities or to supersede any of the accredited volunteer health agencies which have been developed to carry on special health campaigns. So much is axiomatic. On the other hand, the Red Cross does clearly see a great opportunity to advance the public welfare by enlisting alongside of these agencies and by mobilizing the reserve forces of its millions of members, its universal prestige, its democratic and nonsectarian ideals in a new and mightier national effort for the elimination of the unnecessary sickness, poverty and deaths now caused by preventable diseases. With these extraordinary resources the Red Cross is peculiarly qualified to assist in the field of health education by providing the means for the rapid dissemination of authoritative information; and in the last analysis it is recognized that the success of the public-health campaign depends upon getting the facts about public health understood and acted upon by everybody.

One of the greatest services rendered by the privately financed volunteer agency is the undertaking of research and the unfettered experimental development of new projects which may be taken over as routine by the public agencies when their usefulness is demonstrated. In the public-health field there is, after all, perhaps not so much overlapping of effort as uncovering of needs, and if no other means is available the Red Cross may well fill the gap until some other agency, public or private, is ready to step in.

In particular the Red Cross conceives that it may be extremely useful in doing all it legitimately can to obtain better public support for the work of the public-health officials and to aid in the development and coördination of the volunteer organizations, so that the whole field of public health may be effectively covered. In undertaking this program of stimulation and support of those directly charged with health activities the American Red Cross is proceeding in accordance with the principles laid down at the notable international conference of medical and sanitary experts at Cannes, in April, 1919, which resulted in the formation of the new League of Red Cross Societies.

BETTER HEALTH A NATIONAL NECESSITY. That a far more vigorous campaign to promote physical welfare in this country is needed has been made abundantly clear by the experience of the draft examinations, in which approximately one-third of all candidates were rejected for active service on account of physical disability. The significance of this record must be brought home to every city and hamlet in every section of the country. The problem is universal. If anything, the showing is worse in the country than in the city, and all sections alike must share the responsibility for an effort to improve the standard of American vitality. Whatever the Red Cross may undertake in this connection, its smallest rural auxiliary is charged with the same kind of responsibility and duty as the largest city chapter.

RED CROSS PUBLIC-HEALTH NURSING. The first step in the Red Cross health program was the extension of the public-health-nursing service as already organized and in operation under the department of nursing. This was a natural outgrowth of the work of the town and country nursing service begun some years ago by the appointment of a few score of visiting nurses for duty in rural communities. Since the beginning of the present year the chapters have been charged with the formation of committees on nursing activities and the appointment and support of public-health nurses. It goes without saying that public-health nurses appointed by the Red Cross are at all times expected to act in full coöperation with other health agencies, and indeed the policy of the national office calls for the designation of these workers only when other local organizations are not already providing such service. In order to meet the demand for specially trained nurses for this work, scholarships have been provided for nurses returning from war service, courses of instruction in this new science have been encouraged in many educational centers, and hundreds of chapters have liberally financed the preparation of nurses for this new work. The Red Cross, therefore, counts on the speedy creation of a trained personnel to meet the greatly increased need for public-health nurses. With this indispensable foundation of expert professional service, coupled with the financial resources of the army of volunteers which the Red Cross can command, there should result a contribution to the advancement of public-health work of the country to hitherto unparalleled achievements.

HEALTH CENTERS AS THE NEXT STEP. The time has now come for the announcement of the second definite step in the Red Cross health program. This is to be the mobilization of Red Cross interest and influence for the establishment of health centers in every community where conditions make this desirable and possible. These modern community stations of public health and social service not only promise greater efficiency in the public and volunteer activities in this field, but offer a particular opportunity for effective Red Cross participation. In many communities, particularly where the Red Cross is now the only organized social agency, the health center may conceivably begin and continue as a purely Red Cross operation. In larger cities, with their well-established volunteer associations and committees and their more highly organized official

public-health services, the health center may mean the practical physical means to bring about better coördination of these activities. In this case the Red Cross may initiate the movement, or merely participate as one among other agencies, public and private. Indeed, the health-center idea is in itself capable of elastic definition to meet the circumstances and capacities of the smallest as well as the largest chapters. A handbook will be later issued from national headquarters covering the subject in fuller detail. The present statement is intended to describe briefly the nature and purpose of health centers and to suggest in a preliminary way how the Red Cross may best promote their establishment.

It can be seen from the above that the American Red Cross is undertaking a very ambitious program, which, if properly directed by experienced public-health workers, may be a mighty force in forwarding public-health work in an unprecedented fashion throughout the United States.

Up to the present time, however, the public-health work thus far inaugurated by the Red Cross has not been in coöperation with the constituted health authorities, and in many instances in utter disregard of such authority, so that there is more or less confusion and lack of purpose and objective in the work that is undertaken.

The executive committee of the Conference of State Health Authorities has made an effort to bring into coördination and supervision the various extra governmental agencies undertaking public-health work, including that of the Red Cross and the Tuberculosis Association. There is promise that the activities of the executive committee may be justifiably rewarded.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

Minutes First Quarterly Meeting, 1919.

The first quarterly meeting of the State Board of Health was held in the office of the secretary, Saturday, October 18, 1919. Upon roll call the following members of the Board were present: Dr. C. E. Coburn, president, presiding; Dr. H. L. Aldrich, vice president; and Doctors O. D. Walker, C. H. Lerrigo, W. M. Earnest, Ione Clayton and J. J. Entz.

Doctors Entz and Clayton, the two new members of the Board, having previously taken the oath of office, a quorum was declared to be present and the meeting of the Board was in order.

The following members of the advisory board were present: Professors E. H. S. Bailey and L. E. Sayre; C. A. Haskins, engineer; Floyd Tilford, conferee.

The minutes of the annual meeting were then read, and upon motion approved and ordered placed on file.

The report of the secretary was then read, which upon motion was ordered to be placed on file. Whereupon recommendations in the secretary's report were then taken up for general discussion.

As a means for the prevention of diseases of the upper respiratory tract, particularly as a prevention for the spread of influenza, the Board unanimously adopted the following resolution:

STERILIZATION OF PUBLIC FOOD AND DRINKING UTENSILS.

WHEREAS, It is known that certain dangerous communicable diseases are transmitted through and by the secretions of the upper respiratory tract: therefore, be it

Resolved, That all glasses, cups, spoons, forks, knives or other utensils used in serving food or drink to the public that come in contact with the lips or mouth shall be sterilized and adequately protected from contamination before each service: *Provided,* In lieu of sterilization, utensils which are destroyed after service to one individual may be used.

The following regulation was also adopted as a part of the defenses in prevention of the recurrence of influenza:

RULE XXVI-A.

Influenza. (a) All cases must be reported to the health officer within twenty-four hours. If no physician is called the head of the house must report.

(b) The house must be placarded.

(c) All members of the family, not engaged in imperative business, must remain on the premises.

(d) Wage earners may be exempted from quarantine, provided the patient is isolated in a room to himself and the wage earner remain out of the sick room and have written permission from the health officer to come and go upon the premises.

(e) All patients afflicted with the disease must be strictly isolated, coming in contact with no one except the necessary nurse or attendant.

(f) No one is permitted to enter the premises except the attending physician and those who enter as nurses or nurses' attendants.

(g) Nurses or nurses' attendants before entrance must be furnished with instructions to prevent contracting the disease (which instructions may be received from attending physician or from the local health officer), and must be given permission to enter by attending physician.

(h) Quarantine of patients will be continued for five days after temperature has reached normal. Quarantine of contacts or exposed persons must continue for five days after date of last exposure.

(i) Fumigation of premises is unnecessary and impracticable. Families, however, are urged to see that every room has thorough sunning and airing.

The following members voted in the affirmative: Doctors Coburn, Aldrich, Walker, Lerrigo, Earnest, Clayton and Entz.

The following regulation was also presented and unanimously adopted, the following members of the Board voting in the affirmative: Doctors Coburn, Aldrich, Walker, Lerrigo, Earnest, Clayton and Entz.

The regulation follows:

RULE XXXVII-A.

No person afflicted with a venereal disease (gonorrhœa, syphilis or chancroid) in an infectious stage shall be permitted to attend, teach or be otherwise employed in any private, parochial or public school.

Upon motion, the regulations and resolution were ordered to be printed in the official state paper.

The recommendation of the secretary concerning the reorganization of laboratories was then taken up for discussion. Whereupon, the following committee, upon motion, was named by the president on laboratory reorganization: Doctors Crumbine and Walker and Professor Haskins.

Professor Sayre then presented the following letter, which, upon motion, was adopted, and Professor Sayre instructed to present a resolution embodying the sentiment in the letter:

OCTOBER 18, 1919.

To the Members of the State Board of Health, Topeka, Kan.:

GENTLEMEN—There probably has not been a single question that has received more consideration in matters relating to medicine and pharmacy than that of *alcohol*. The nation-wide movement to limit the use of alcohol to very restricted lines is well recognized and receives the approbation of both the medical and pharmaceutical professions. From the last revision of the Pharmacopœia there was deleted not only a number of preparations which would lend themselves to beverage purposes, but also such as were beverages in themselves. Even whisky, brandy and wine were eliminated, and in many other cases the percentage of alcohol in alcoholic preparations was materially reduced.

Some members of your committee on standards have discussed this question of alcohol in medicinal preparations and feel that the time is now ripe for such institutions as the Board of Health of Kansas to use their influence in the direction indicated at the next convention for the revision of the United States Pharmacopœia, which meets in Washington in the early part of May. At this convention no doubt there will be seriously considered the general question of the restriction of the use of alcohol in medicinal preparations. It is contended on the part of some that the present pharmacopœial products cannot possibly be reduced in alcoholic strength. What scientific basis there is for this contention we are unable to say, but we feel that at the convention above named this problem will receive careful consideration and appropriate action.

It seems to your committee that there should be a general statement in the next Pharmacopœia (tenth revision) referring to the limit of alcohol, to the effect, for example, that the amount of alcohol contained in medicinal preparations should represent not more than the amount necessary for extracting the medicinal principles and the minimum amount that will keep the dissolved medicaments from deterioration.

We would also hope that the Board of Health will seek representation at the decennial pharmacopœial convention in Washington, through secretary Crumbine.

E. H. S. BAILLY.

L. E. SAYRE.

Whereupon, the following resolution was presented, which was unanimously adopted, all the members present voting in the affirmative:

Be it resolved, That it is the sense of the Board of Health of the state of Kansas that official medicinal preparations containing alcohol shall, in the finished product, contain only that amount of alcohol which is absolutely necessary for extracting the medicinal principles and for preserving the preparation, or to keep it from deterioration, and that the United States Pharmacopœia, tenth revision, expressly state this fact in its "General Principles."

It is further resolved, That the attention of the pharmacopœial convention, which will meet in May, 1920, Washington, D. C., be called to this action.

The recommendation of the secretary concerning a committee to investigate the preservation of the natural waters of the state in relation to oil wastes and untreated sewage from certain cities was then taken up for discussion, and upon motion the president appointed a committee, consisting of Doctors Aldrich, Entz, Crumbine and Mr. Haskins, to investigate the question of the oil-waste pollution of the natural waters of the state and sewage disposal of the city of Emporia and such other cities on the watershed of the Neosho and Verdigris rivers as the committee thought expedient and to make a report to the Board at its next quarterly meeting.

Doctor Sherbon, of the Division of Child Hygiene, then made a report of her inspections of orphan children and children's detention homes and maternity hospitals. Blank forms were presented for approval, whereupon the Board authorized a committee, comprised of the chiefs of the divisions, to confer and agree upon the necessary blanks and forms for

carrying into effect the inspection law and authorizing the approval of such blanks and forms that were agreed upon by the chiefs of divisions.

Upon motion, the notice to Mrs. Blakeman, of Wichita, refusing the issuance of a license to conduct a children's home in that city, was approved.

The standards committee then made its report, and upon motion the following revision to regulation 35 of the food standards was unanimously adopted, the following members voting in the affirmative: Doctors Coburn, Aldrich, Walker, Lerrigo, Earnest, Clayton and Entz.

REGULATION 35.

II. Vegetable Products.

D. CONDIMENTS (EXCEPT VINEGAR AND SALT).

b. FLAVORING EXTRACTS AND FLAVORINGS.

1. *Flavoring extract, extract*, is a solution, in ethyl alcohol of proper strength, of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and without added coloring matter, and conforms in name to the plant used in its preparation. Substances sold for flavoring under names used in the United States Pharmacopœia or National Formulary shall conform to the requirements of those authorities in respect to strength and quality.

1. (a) *Flavoring, flavor*, is a solution or mixture of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and without added coloring matter, and conforms in name to the plant used in its preparation. Substances sold for flavoring under names used in the United States Pharmacopœia or National Formulary shall conform to the requirements of those authorities in respect to strength and quality.

25. An *imitation flavoring* is an uncolored solution or mixture consisting largely of artificial flavoring substances, is labeled as an imitation, and conforms in name to the flavor imitated.

Upon motion, the following resolution and regulations were unanimously adopted, all the members of the Board voting in the affirmative:

ABOLITION OF THE COMMON DRINKING CUP.

WHEREAS, It has been repeatedly demonstrated that the use of what is usually known as the common drinking cup is dangerous and is an undoubted source of communication of infectious diseases: now, therefore, in the interest of the public health,

Be it ruled by the Kansas State Board of Health, That the use of the common drinking cup on railroad trains, in railroad stations, in the public and private schools and the state educational institutions of the state of Kansas, in *hotels, restaurants, mercantile establishments, manufacturing establishments, theaters, picture shows, dance halls or any other public place*, is hereby prohibited.

ABOLITION OF THE COMMON TOWEL.

No person or corporation shall place, furnish or keep in place in any hotel, restaurant, mercantile establishment, manufacturing establishment, theater, dance hall, railway train, railway station, public or private school, or in any other public place, any towel for the common public use, and no person or corporation in charge or control of any such place shall permit in such place the use of the common towel.

The term "common towel" as used herein shall be construed to mean roller towels or towels intended or available for common use by more than one person without being laundered after such use.

The following bills were audited and allowed:

Doctor Coburn	\$8.90
Doctor Aldrich	26.67
Doctor Walker	22.64
Doctor Earnest	20.06
Doctor Clayton	24.43
Doctor Entz	19.23
Professor Bailey	2.55
Professor Sayre	3.01
Mr. Tilford	19.91

No other business appearing, upon motion the Board adjourned.

Respectfully submitted. S. J. CRUMBINE, M.D., *Secretary.*

SECOND QUARTERLY MEETING, 1920.

Held in the office of the secretary, Topeka, Kan., Thursday, January 15, 1920.

Report of the Secretary.

To the Members of the Board—Greeting:

The state of health throughout the commonwealth since the last quarterly meeting has been satisfactory, as revealed in the comparatively low morbidity and the continued low mortality. No serious epidemics have occurred in any part of the state, and up to the present time influenza has not appeared in epidemic form in any portion of the United States.

The work of the various divisions is being carried on in a satisfactory manner.

THE PUBLIC-HEALTH CAR. The public-health car "Warren" has completed its winter tour and is now parked in the state fairgrounds, on the Santa Fe tracks, where it will remain until the advent of early spring.

FREE DENTAL INSPECTION. We are watching the trial of free dental inspection throughout the state with a great deal of interest, and while this department is not charged with the enforcement of the free dental inspection law, we are, of course, greatly interested in its success as a public-health measure. The consolidated reports of the result of inspections are being received in this office, and are being tabulated as fast as received. We trust that by the end of the year we will have some very valuable and interesting information, the result of this inspection.

DIVISION OF VENEREAL DISEASES. Following the action of the governor in relation to the coal strike, and after the mines had been placed in the hands of the receiver and volunteers, together with the National Guard coöperating with Federal troops, I addressed the following letter to the governor:

DECEMBER 4, 1919.

Hon. Henry Allen, Governor, Statehouse:

DEAR GOVERNOR ALLEN—The reputation that the Joplin-Pittsburg mining district bears in relation to social vice, which reputation is borne out in the result of draft examinations from the Joplin district, makes me apprehensive of what may happen to some of our young men who have volunteered their services in such a splendid fashion to relieve the suffering in the state. As you know, most of these men are young, unmarried, red-blooded fellows, who might likely consider it a matter of great adventure and take chances on occasion which may prove disastrous to them.

Pittsburg is one of the cities of the first class where we have thus far been unable to secure the coöperation of the city health authorities in venereal-disease control, and Joplin, as every one knows, has been notorious for years in commercialized vice.

I have, therefore, taken the matter up with Federal authorities and asked them for a

detail of social workers and investigators, to the end that trustworthy evidence may be gathered and prostitutes located, so that the constituted authorities of both city and county may have no excuse in refusing to do their duty in apprehending these individuals, after which it becomes the duty of the local health officers to determine whether or not they are venereally infected, and if so, to start a procession to Lansing.

In order that our program may be carried out with promptness and vigor, may I request that you communicate with the mayor of Pittsburg and the other incorporated towns in or near which camps are located; also with the county attorney and county sheriff of Cherokee and Crawford counties, requesting prompt action in the suppression of commercialized vice and the arrest of all pimps and prostitutes?

The local and state departments of health will do the rest if the individuals are found to be infected; if they are not infected, then vagrancy charges should be preferred against those who have actively engaged in prostitution, under which charge they can be sent to the State Industrial Farm.

I wish to assure you, Governor, of our desire to coöperate with you in every possible way in making your undertaking not only a great success, but in making it safe for our young men who are down there working. It is a great task you have undertaken, and we are all backing you to the limit.

Very sincerely,

S. J. CRUMBINE, M. D., *Secretary.*

The reply of the governor follows herewith:

TOPEKA, December 6, 1919.

Mr. S. J. Crumbine, Secretary State Board of Health, Topeka, Kan.:

DEAR DOCTOR CRUMBINE—I have your letter of the 4th instant. I have talked a number of times with Sheriff Webb about the situation down here, and he promised me the utmost coöperation, but I do not feel assured that all is being done that should be done. The situation in Cherokee county is not likely to become as bad, but both counties need looking after, and I wondered if it would be possible for you to send one of your agents down here to help out.

We have our hands full with the other operations, and I believe the local officers will not do their best work unless they are intelligently watched. If you have a man whom you can trust who can be sent down here quietly to take a survey of the situation, I think it would help. The man you send should be capable of investigating the general situation as to the prevalence here of prostitutes.

We are getting well organized with a medical staff which can handle those who have become infected, but we need someone who will make it a special business to round up the prostitutes. Let me know what you think you can do about this, please.

Yours very truly,

H. J. ALLEN, *Governor.*

My letter in reply to the governor, dated December 8, is as follows:

DECEMBER 8, 1919.

Hon. Henry J. Allen, Governor, Statehouse:

DEAR GOVERNOR ALLEN—Replying to your letter of December 6, will say that I have secured, through the United States Interdepartmental Social Hygiene Board, the appointment of an investigator for Pittsburg and vicinity, who I think will be on the ground in a day or two. Definite information will thus be given to the local authorities, and it is then up to them to make arrests.

The local boards of health in Cherokee and Crawford counties and the city board of health in Pittsburg have been advised of the necessity of prompt examination and quarantine of all infected individuals. Arrangements are being made at the State Normal at Pittsburg for laboratory work for the examination of smears, so that prompt action can be taken.

I wish at this time, Governor, to invite your attention to the unintentional omission of the last legislature to provide funds to the State Board of Health for venereal-disease control. You will remember that the house passed the appropriation which was to give us the sum provided by the Federal government so that we could secure equivalent funds and continue the work along this line which had been so auspiciously begun, and, we have been told by those who ought to know, was handled in a more satisfactory way than in any other state in the Union. The senate during the last minutes of the legislature failed to pass this item, although they thought they had done so, confusing the item providing

for the maintenance of the State Industrial Farm for Women with the item supposed to go to the State Board of Health. Thus we were left without funds.

This work is so tremendously important, and the intention of the legislature, as expressed through the written statement of the chairman to the senate ways and means committee, had intended to pass this item which was passed by the house, that it seems to me to be entirely appropriate and proper for the matter to be presented to the legislature if you call it in special session, as it has been rumored you expect to do.

May I, therefore, request that you lay the matter before the legislature in such manner as you see fit! Respectfully, S. J. CRUMBINE, M. D., *Secretary*.

A laboratory was set up at the State Normal School at Pittsburg and a bacteriologist was secured by Professor Haskins for the State Board of Health, who was to serve the medical department and the volunteer physicians who were on the ground to take care of the volunteer coal miners and the National Guard troops.

Upon my request, our engineer, Professor Haskins, made a sanitary survey of the camps, making such suggestions to the medical department of the National Guard as seemed to be necessary.

The secretary simply wishes to record the fact that this department acted promptly, and we believe effectively, in carrying forth the government's emergency program.

THE STATE COMMITTEE ON SOCIAL HYGIENE. January 3 the following letter was submitted to a list of twenty persons (whose names appear in the letter), which was in accordance with the suggestion made by the Interdepartmental Social Hygiene Board. Up to the present time most of those addressed have accepted membership on this committee; there have been no refusals.

TOPEKA, KAN., January 3, 1920.

DEAR SIR (OR MADAM)—In a congressional act approved July 9, 1918, entitled, "An act making appropriations for the support of the army for the fiscal year ending June 30, 1919," the following section appears: "In the extension of the educational measures, the state's health authorities and its bureau of venereal disease shall exert their efforts and influence for the organization of a state venereal-disease committee that will be unofficial in character, but an available coöperative agency for furthering the comprehensive plan for nation-wide venereal-disease control."

Accordingly, the department of the State Board of Health wishes to organize a committee of twenty persons, under the designation of "The State Committee on Social Hygiene," and respectfully suggests the names of the following persons to constitute such committee:

Dr. Wilbur N. Mason, Topeka; Mrs. J. K. Coddington, Lansing; Prof. W. A. Brandenburg, president State Manual Training Normal School, Pittsburg; Senator Benjamin Bruner, Wamego; Senator Francis C. Price, Ashland; Representative Lacey Simpson, Canton; Representative Benj. F. Hegler, Wichita; Representative W. W. Harvey, Ashland; Mrs. Julia Perry, Lansing; James Naismith, K. U., Lawrence; Prof. Wm. Baumgartner, K. U., Lawrence; Clifford Pierce, general secretary Y. M. C. A., Topeka; Mrs. Mary W. McFarlane, K. S. A. C., Manhattan; Mrs. C. O. Swanson, Manhattan; Mrs. Lillian Mitchner, president W. C. T. U., Topeka; ex-Gov. Geo. H. Hodges, Olathe; Rev. Charles M. Sheldon, Topeka; Wm. Allen White, author and publicist, Emporia; Dr. George M. Gray, surgeon, Kansas City; Miss LaRee Cave, State Normal School, Hays.

I am sending a copy of this letter to each person herein proposed as a member of the committee, with the request that I be advised by each of his willingness to serve.

I sincerely trust that you have both the time and inclination to lend the influence of your name and effort toward the furtherance of one of the most important problems confronting the race to-day. Sincerely yours, S. J. CRUMBINE, M. D., *Secretary*.

DIVISION OF FOODS AND DRUGS. On December 11 the following circular letter was issued to county and city health officers:

TOPEKA, December 11, 1919.

To County and City Health Officers:

The department of the State Board of Health wishes to invite your attention to a new regulation passed by the Board at its last quarterly meeting, which is intended to act as a barrier to prevent the dissemination of diseases of the upper respiratory tract, and particularly as a defense against the possibility of a recurrence of influenza epidemic. This regulation reads as follows:

STERILIZATION OF PUBLIC FOOD AND DRINKING UTENSILS.

WHEREAS, It is known that certain dangerous communicable diseases are transmitted through and by the secretions of the upper respiratory tract: therefore, be it

Resolved, That all glasses, cups, spoons, forks, knives or other utensils used in serving food or drink to the public that come in contact with the lips or mouth shall be sterilized and adequately protected from contamination before each service: *Provided,* In lieu of sterilization, utensils which are destroyed after service to one individual may be used.

Will you be good enough to see that all places serving drinks to the public and all hotels and restaurants are notified of this regulation by circular letter or personal visitation, and also by publication in the county and city papers.

The Board at this same meeting passed regulations requiring the quarantine of influenza and prompt reporting to the health officer of all cases occurring in your jurisdiction.

The executive officer for the Board sends the season's greeting and expresses the hope that you may have a very merry Christmas and a prosperous and happy New Year.

Fraternally yours, S. J. CRUMBINE, M. D.,
Secretary and Executive Officer, State Board of Health.

FULL-TIME COUNTY HEALTH ORGANIZATIONS. Up to the present time there are four counties providing a full-time health organization, including a full-time health officer, with assistance in the shape of one or more public-health nurses and one or more sanitary inspectors. These counties are Butler, Marion, Cherokee and Geary. I have also been commissioned to secure a full-time health officer for Morris county, and negotiations are now pending for a full-time health officer for Ottawa county. We hope before another year rolls around that there may be eight or ten full-time county health organizations in the state.

The following cities now have full-time health officers, in the order of their appointment: Topeka, Wichita, Lawrence and Kansas City.

On January 12 and 13 your secretary was in St. Louis in conference with the regional director of the southwest division of the American Red Cross concerning a plan of coöperation between the American Red Cross and the department of the State Board of Health and local and other public-health agencies, such as the State Tuberculosis Association and similar organizations.

The following is a memorandum of the agreement concluded at this meeting, which is herewith presented for your consideration, and I trust will receive your approval:

Minutes of conference on the development of public-health program, State of Kansas, held at the headquarters of the Southwestern Division of the American Red Cross, 901 Equitable building, Monday morning, January 12, 1920.

PRESENT: Dr. S. J. Crumbine, Mrs. V. K. Kimble, Miss Lyda W. Anderson, Mr. Alfred Fairbank.

The purpose of the conference was to determine what Red Cross participation seemed

desirable in the development of the general public-health program in the state of Kansas; to arrange for the inauguration of such Red Cross coöperation; and for the plan of supervision of such activities until the final plan is consummated and adopted in any given county or city of the first class.

The conference developed that there are numerous organizations interested in public-health work in Kansas in one or more of its various activities, viz.:

(a) Kansas Public Health Association, made up of the public-health officers, public-health nurses, and others interested in public-health work.

(b) State Tuberculosis Association.

(c) State Mental Hygiene Association.

(d) Kansas Conference of Social Workers.

(e) Mothers' and Parents' Teachers' Association.

(f) Strong committees of the State Federation of Women's Clubs.

(g) The extension division of the State Agricultural College and Normal Schools, particularly with the rural division of the Agricultural College and of the American Red Cross.

The State Board of Health has for some years, in accordance with the laws of Kansas, gathered health statistics in relation to the different counties, and they are now in possession of much valuable data, particularly with respect to mortality and morbidity, and are in position to tell with considerable accuracy the health situation in any given county. This material makes possible the sensible and proper development of all the efforts within the county to meet the health problems of that county.

In accordance with laws already passed and with policies developed as the result of years of experience, the State Board of Health has centralized its work on the development of a county health plan, which includes a full-time county health officer, one or more full-time public-health nurses, sanitary inspector and a clerk, and such other needful machinery as is necessary to make all the foregoing effective. It is, therefore, desirable to fit in Red Cross participation in the solving of the health problems of Kansas into this general county unit health plan.

In Kansas there are ten cities of the first class. These cities have a population of 16,000 or over. Cities of the first class are separate units in public-health work. It is, therefore, designed to create in each city of the first class a full-time health organization similar to that designed for the counties, engaging the same minimum personnel. The county health organization does not include the cities of the first class; therefore, separate health units should be considered for all such cities.

In order that the fullest coöperation between the American Red Cross and the State Board of Health may be brought to bear on the common problem of the early establishment of full-time health organizations, it is recognized as a principle that all public-health activities should be under the direction of the executive officer of the State Board of Health.

The conference develops that there are approximately twenty-six Red Cross public-health nurses in the field actively at work, with the possibility of this number reaching thirty-five by March 1; that there are approximately sixty other public-health nurses that work on this date in Kansas, or a total of about 100 public-health nurses at work in the state.

It also develops that it is desirable to establish a course for the training of public-health nurses, preferably in conjunction with the State University at Lawrence, and that any assistance which the Red Cross can give to the plan being worked out by the executive officer of the State Board of Health, in conjunction with the State University, might help, particularly if some of the lectures being worked out by the Red Cross for the training of its Red Cross home-service secretaries might also be utilized in the training of the public-health nurses. This would make possible the training of Kansas nurses at the Kansas University, and would be a great contributing factor in the development of the entire public-health program in the state.

The conference developed that there are, roughly speaking, three types of communities in which Red Cross assistance might be desirable to wit:

1. In the community where no plans for the further development of a public-health program have been formulated and no organization is at work.

2. A community where there is no organization at work, but where plans have been made and are about ready to be put into effect.

3. Where parts of the plan are already in operation and the program is a going proposition.

This conference has agreed that after conference with the executive officer, in particular instances the Red Cross will go into the first type of community enumerated above and seek through its public-health nursing to meet the needs of that community as indicated by the study of the community on file in the State Board of Health office, the supervision of such Red Cross participation to be under the Red Cross supervisor.

In the second type of community the Red Cross will not formulate plans to go into such community except upon conference with the executive officers, so that such plans for the Red Cross will be a part of and supplement the already prepared plans for that community and will not contradict or in any way interfere with such proposed plans. If the Red Cross participation in this program means the supplying of a major portion of the funds, the supervision of the Red Cross participation will be under Red Cross supervision, but where the Red Cross financial participation is only half or less than the participation of other agencies, the plan for supervision will be one of coördination to be worked out by the executive officer in conference with the State Red Cross supervisor.

With respect to the third class of community outlined above, where the Red Cross participation is a minor element in the program, the supervision is to be under the executive officer direct.

In the second and third type of community above enumerated the Red Cross participation in the program for the county is to be secured from the chapter by what seems to be the most desirable party, such decision being made as the result of a conference with the executive officer and the state supervisor of Red Cross public-health nursing in Kansas. It shall be the duty of Red Cross public-health nurses, when placed, to coöperate as fully as possible with the county health officer, and also the duty of the supervisory nurse to see that such coöperation is afforded the county health officer and all situations where such coöperation is impossible or ineffective, to be referred to the executive officer for adjustment.

Wherever Red Cross furnishes the money for a public-health nurse it is understood that she will come prepared to present the proper qualifications that will measure up to the Red Cross standards for a public-health nurse.

In order to guide and direct the Red Cross participation in the public-health program for Kansas, the southwestern division of the Red Cross proposes to furnish at once one supervisory nurse, one assistant supervisory nurse, and as soon as the number of Red Cross nurses at work warrants it, a second assistant supervisory nurse, all of whose salary and expenses will be paid by the southwestern division of the American Red Cross.

The Red Cross accepts the offer of the executive officer to coördinate and correlate the work of the Red Cross in Kansas, so that it will not conflict in any way with the general program and will at all times seek to coöperate and develop its work so that as rapidly as possible the plan for each individual county for the development of its public-health program may be consummated at an early date. This carries with it the desire of the Red Cross to furnish the executive officer at all times with such needful data and reports as may be agreed upon between him and the state supervisory nurse of the Red Cross, he to furnish such state supervisory nurse of the Red Cross with such reports as the National Red Cross requires, where the Red Cross is furnishing the nurse who is being supervised by some other agency other than the Red Cross.

The Red Cross chapters of Kansas, on their request, will be authorized to make either a loan of money or a grant of money to an enrolled Red Cross nurse or one eligible for enrollment in the Red Cross, and who is suitable for the work, to enable such nurse to take a minimum authorized course of four months in order to qualify as public-health nurse, each such case to be submitted to the director of public-health nursing of the southwestern division.

It is agreed that it seems desirable to have a conference of all the Red Cross nurses that work in Kansas, at Topeka, some time early in the month of April, for the purpose of laying before them the plans for the development of public-health nursing in that state.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Executive Officer.*

Minutes of Second Quarterly Meeting, 1920.

The second quarterly meeting of the State Board of Health was held in the office of the secretary at Topeka, January 15, 1920. Upon roll call all the members of the Board were present except Dr. Ione Clayton. Dr. Clay E. Coburn, president, presided.

The minutes of the last quarterly meeting were read, and upon motion were approved as read, and ordered placed on file.

The report of the secretary was then read. After a full and free discussion, the principles laid down in the minutes of a conference held at St. Louis on Monday, January 12, between the director of the southwestern division of the American Red Cross and the executive officer of the State Board of Health, were unanimously approved.

COMMITTEE REPORTS. The standards committee then made their report, and upon motion the following amendments to regulation 35 of the food standards were unanimously adopted, Doctors Coburn, Lerrigo, Axtell, Ewing, Aldrich, Walker, Earnest and Entz voting in the affirmative:

REGULATION 35.

1 *Animal Products.*

B. MILK AND ITS PRODUCTS.

a. MILKS.

9. *Buttermilk* is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. It contains not less than eight and five-tenths per cent (8.5%) of milk solids, not fat.

b. CREAM.

3. *Whipping cream* is cream which contains not less than thirty (30%) of milk fat.

B. FRUIT AND VEGETABLES.

a. FRUIT AND FRUIT PRODUCTS.

(*Except fruit juices, fresh, sweet and fermented, and vinegars.*)

16. *Grape fruit* is considered to be immature if the juice does not contain soluble solids equal to or in excess of seven parts to each part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystalization.

F. BEVERAGES.

b. CARBONATED BEVERAGES.

1. *Pop, soda pop, soda water*, is the carbonated beverage prepared with potable water, sugar (sucrose) syrup and natural flavors, with or without fruit acids other than tartaric. If other ingredients are added or if imitation flavors are used, declaration shall be made on the label: *Provided*, That the use of saccharin and mineral acids other than phosphoric acid is prohibited.

Doctor Walker reported for the special committee on laboratory reorganization, which was to the general effect that the Wasserman laboratory had been reopened at Rosedale in coöperation with the School of Medicine of the University of Kansas, and that the diagnostic laboratory at Topeka and the Water and Sewage Laboratories at Lawrence be continued as in the past.

The committee expressed the hope that the laboratories might possibly be gotten together by the end of the fiscal year, whereupon, on motion, the committee's report was accepted and the committee continued.

The special committee on the pollution of the natural waters of the state by the waste from oil wells, refineries and untreated sewage, as related to the Neosho and Verdigris rivers, then made a preliminary report, which upon motion was received and placed on file, and the committee continued.

The engineer, Professor Haskins, made a statement concerning the charge for the examination of certain small water supplies which served only a few people in the community, wherein it seemed unfair to make the average charge which is made against the average municipality. Accordingly the Board, by unanimous vote, instructed the Water and Sewage Laboratory to reduce the charge from \$10 per annum to an amount which would cover the actual cost of one analysis.

Upon motion, the annual charge for the examination of ice which upon analysis was found to be polluted to such a degree as to be unsuitable for use for domestic purposes, and for which no license could be issued, was changed to be a fee of \$2.50 for analysis instead of \$15 per year.

Doctor Walker then presented the following resolution, which was unanimously adopted:

The Kansas State Board of Health, in regular quarterly session, this 15th day of January, 1920, presents to the legislature of the state of Kansas, now assembled in special session, the following resolution and recommendation:

"WHEREAS, The State Board of Health considers its Division of Vital Statistics of equal importance with other divisions of the state department of health; and

"WHEREAS, No increase was made in the salary of the chief of the Division of Vital Statistics nor of his assistant by the state legislature at its thirty-eighth regular session; and

"WHEREAS, The governor of the state of Kansas has recommended to the legislature that salaries of state officials drawing less than \$2,500 per annum be increased as an emergency measure; therefore, be it

"Resolved, That the Kansas State Board of Health recommend to the special session of the legislature of the state of Kansas that it take action to increase the salaries of the registrar and the assistant registrar of the Division of Vital Statistics of the State Board of Health."

The following bills were audited and allowed:

Dr. C. E. Coburn	\$8.80
Dr. J. J. Entz	17.27
Dr. H. L. Aldrich	26.55
Dr. C. H. Ewing	24.24
Dr. Wm. M. Earnest	21.79
Dr. O. D. Walker	20.39
Dr. J. T. Axtell	17.98
Mr. J. F. Tilford	17.61

No other business appearing, the Board, upon motion, adjourned.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

THIRD QUARTERLY MEETING, 1920.

Held in the offices of the Secretary, Topeka, Kan., Thursday, March 25, 1920.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

Since the last quarterly meeting in January the state has been visited by a widespread epidemic of influenza. Data as to the fatality resulting therefrom is not yet available, but that the fatality was much less than the epidemic of 1918-1919 is certain, although many a fireside has an empty chair, and many a mature, sturdy and promising individual must remain for a greater or less time in a crippled and weakened condition.

Effort was made by the department to prepare for the epidemic. It is desired, therefore, to place on record some of the methods of preparation in the hope that they may be of avail in future emergencies of a similar character. On January 20 the following circular letter was sent to the health officers of Kansas, together with a copy of the sterilization resolution, which read as follows:

TOPEKA, January 20, 1920.

To the Health Officers of Kansas:

According to press reports, influenza in epidemic form is again ravaging Spain, Japan and Poland and has suddenly appeared at the Great Lakes naval training station, rapidly spreading to Chicago, where it is now claiming a large number of victims daily. It seems probable that the country cannot hope to escape another epidemic of this highly communicable disease, with its attendant mortality from pneumonia or other complications.

The extent of its ravages may, in a degree, depend on our diligence in enforcing those laws and regulations that are intended as a bar and hindrance to its spread. I desire, therefore, to again invite your attention to quarantine provisions for influenza and the necessity of securing from your physicians immediate reports of all cases occurring in their practice. Outbreaks epidemic in character should be reported to this office by wire.

You are requested to enforce at once and without fail the State Board's regulation requiring the actual sterilization of all eating and drinking utensils used to serve food or drinks to the public. There is abundant evidence to warrant the belief that one of the methods of transmission of this disease is that of "hand-to-mouth" infection. Therefore, we must leave nothing undone that will contribute to "a severing of that line of communication."

In the absence of definite knowledge of the cause of influenza, the use of vaccines to prevent the disease cannot be relied on, but it would seem to be the part of wisdom to make an effort to secure immunity against the most fatal complication of influenza—*pneumonia*. The use of mixed vaccines designed for that purpose, put out by reputable biological houses under government inspection, should therefore be encouraged.

It is suggested that a survey or inventory be made of all available resources in your county and in cities of the first and second class, which should include the number of nurses available for influenza nursing; hospitals or buildings that might be readily converted into emergency hospitals; hospital supplies, motor transportation, canteen supplies, etc. A detailed memorandum of such inventory should be mailed to this department at the earliest possible date.

This is a matter of urgent importance. May we expect your whole-hearted coöperation in this program of preparedness?

Sincerely and fraternally,

S. J. CRUMBINE, M. D., *Secretary and Executive Officer.*

STERILIZATION OF PUBLIC FOOD AND DRINKING UTENSILS.

WHEREAS, It is known that certain dangerous communicable diseases are transmitted through and by the secretions of the upper respiratory tract: therefore, be it

Resolved, That all glasses, cups, spoons, forks, knives or other utensils used in serving food or drink to the public that come in contact with the lips or mouth shall be sterilized and adequately protected from contamination before each service: *Provided*, In lieu of sterilization, utensils which are destroyed after service to one individual may be used.

(Regulation unanimously adopted at a regular meeting of the State Board of Health, held in Topeka, October 18, 1919.)

Application was made to the Surgeon General of the United States Public Health Service for financial aid in event it became necessary to detail to stricken communities extra medical or nursing service. I was informed that no financial aid could be expected; that states and communities would have to prepare for and finance their own emergency measures. The Public Health Service did offer, however, the use of telegraphic franks for sending in daily reports by local health officers to the State Board of Health, to be in turn transmitted as a consolidated daily report to the Public Health Bureau at Washington. Accordingly the following circular letter was sent to local health officers:

TOPEKA, January 23, 1920.

DEAR DOCTOR—We have just received a telegram from the Surgeon General of the United States Public Health Service, informing us that health officers can send telegraphic reports to the state collaborating epidemiologist, giving a daily report of cases of influenza in their districts. This telegram must be sent strictly in accordance with the requirements of the government; any variation whatever will result in the telegram being charged back to the sender.

First, the telegram must be addressed to "Collaborating Epidemiologist, Topeka, Kansas." The telegram must be signed only with your surname. In addition, the telegram must be marked below the name, "Government rate collect, U. S. Public Health Service." The following is a sample form:

EUPHRATA, KAN., January 23, 1920.

Collaborating Epidemiologist, Topeka, Kan.:

Twenty-seven cases influenza reported to-day.

Government rate collect, U. S. Public Health Service.

SMITH.

Please notify us by wire daily, in accordance with the above requirements, the number of cases of influenza that may be reported to you if the influenza is prevalent in your jurisdiction. It is not necessary to send a telegram of "no cases," we taking it for granted that no report, under the circumstances, will indicate no cases.

Let's do our best to head off this epidemic!

Yours very truly,

_____, *Epidemiologist.*

P. S.—This does not waive the requirement of sending in the original report cards, or no-report card, on Saturday of each week.

This was followed by another circular letter, dated January 29, which was designed to aid in the state-wide educational work in relation to the influenza epidemic, affording an opportunity for any one interested to secure authoritative information concerning influenza and its complicating pneumonias. The letter follows:

TOPEKA, January 29, 1920.

To the Health Officers:

In addition to the reporting of influenza cases daily, please report cases of pneumonia and fatalities from pneumonia and influenza in your daily wire.

The following literature is available upon your requisition:

Our special (September issue) *Bulletin* on influenza.

Instructions for nurses, attendants, aids, relatives, caring for influenza and pneumonia patients.

Our leaflet on pneumonia, "The Season's Danger."

This literature should at the present time have a wide distribution, and I trust that you can find means for such distribution.

Faternally,

S. J. CRUMBINE, M. D., *Executive Officer.*

Numerous press stories of an educational nature were in like measure sent out over the state, advertising the fact that certain bulletins and literature were available upon request, bearing upon influenza and its prevention and treatment. Leaflets on pneumonia were enclosed in all letters leaving the department, and in this manner an intensive educational campaign was inaugurated, which we trust may have been the means of saving human life. Emphasis was constantly placed upon the importance of patients having influenza going to bed and remaining there for at least three days after the temperature had become normal. This precaution was more widely followed than in the previous epidemic and must have been of great value in preventing the complicating pneumonias. That the people were interested was evidenced by the large number of requests received in every mail for the various publications of the department dealing with influenza and its complications.

The legislature being in extraordinary session, the matter of an emergency appropriation was presented to provide for emergency medical and nursing service to carry on research and investigation concerning the cause and methods of dissemination of influenza, and to provide prophylactic vaccines against the complicating pneumonias. The legislature appropriated \$25,000 for such purpose, and this work has been going forward, the details of which will be made the subject of the secretary's report at the annual meeting in June.

Another method of preparation was to secure emergency hospital equipment and supplies for immediate distribution to cities or communities that wished to establish emergency hospitals and where the local hospital facilities were inadequate. Accordingly, permission was sought from the War Department to use such supplies upon requisition from this department. At first such requisitions were authorized, but later the Secretary of War advised the governor, through your secretary, in a long-distance communication, that it would be necessary to have a special enactment by Congress to permit army hospital equipment to be loaned to the states; whereupon the matter was taken up with United States Senator Curtis, and a resolution introduced in the Senate and passed as an emergency measure on the same afternoon, and the following day by the House, and the hospital equipment at Fort Riley then became the subject of requisition for this department. Emergency hospital equipment was used at the following places in the following stated amounts: Topeka, 200 beds with complete equipment therefor, including drugs and medicines; University of Kansas, 200 beds with complete equipment; Hillsboro, 75 army blankets.

The State Tuberculosis Association and the public-health nurses of the American Red Cross organized the nursing services of many of the counties, which included those who would volunteer to serve as nursing aids which had taken the Red Cross nursing course.

Among the other methods of preparedness, the Kansas State Tuberculosis Association volunteered its entire force of nurses and physicians to work under the direction of the State Board of Health, if emergency should arise to occasion such service. This service was accepted, and the medical field director, Doctor Cox, and all the nurses, including the

supervising nurse, served during the epidemic with conspicuous ability and devotion to duty.

These measures, together with the volunteer list of nurses and physicians, secured last fall by this department, made ample provision for relief agencies, which stood us well in hand during the progress of this year's epidemic, and contributed in no small measure to the relief of human suffering and the saving of human life. Complete details as to the personnel of those engaged in emergency services will be included in the annual report.

VENEREAL-DISEASE CONTROL. The legislature of 1920 appropriated the sum of \$18,385.42, to match a like amount from the Federal government, and for the purpose of carrying on the work of the venereal-disease division.

On March 19 and 29 there was held at Washburn a conference on sex education in the high school.

An intensive program is in process of formation to carry out a state-wide educational campaign on sex education, designed primarily to reach the high-school students of the state. A special program is being prepared, designed to reach the colored young people in the state. Notwithstanding the work of the department along these lines has been greatly hampered and curtailed for lack of funds, yet distinct progress has been made, and an increasing number of those who have been infected and were spreading disease have been placed in quarantine and treated for their affection, which will do some good, if not in reforming the individual, at least in staying the progress of the spread of venereal disease.

The Interdepartmental Bureau of Social Hygiene has assigned to this department a bureau of social-service measures, the personnel of which consists of a field agent, C. A. Bantleon, two social-service workers (women), and two stenographers. It was originally designed that their services to this department should begin March 15, but owing to unforeseen difficulties this date was deferred until March 29. A complete résumé and full account of the activities along these lines will be given at the annual meeting, together with the activities of the other divisions of the department.

For a second time we have recently sent out solution of silver nitrate packages to all those engaged in obstetrical work, the names of which were secured from the birth returns to the Central Division of Vital Statistics. The following letter accompanied each package:

TOPEKA, March, 1920.

DEAR DOCTOR—Please accept this package of one per cent solution of silver nitrate with the compliments of the Kansas State Board of Health.

The Board ventures to suggest the desirability of using this as a routine procedure in the eyes of every new-born baby. Such procedure is sanctioned by the best authorities in the world. Occasionally very slight redness is produced in the eyes of the child, which rapidly disappears. If it is so used that the solution comes in contact with the exposed portions of the eye there is reasonable assurance that the dread disease ophthalmia neonatorum will be avoided.

In the bottom of the mailing case is an extra rubber tip for use when the other one becomes loose or worn. It is suggested that the package be left in the mailing case in

order to secure absolute freedom from the light and its deteriorating effect upon the solution.

Put this package in your obstetrical bag now, together with a pad of birth-report blanks.

May we again request your coöperation in promptly reporting all births occurring in your practice within the time limit set by law, namely, ten days.

Thanking you for your cordial coöperation in these matters, I am,

Faternally,

S. J. CRUMBINE, M. D.,

Secretary and Executive Officer.

A number of other matters of minor importance will come up for your consideration, but will be presented under the head of new business.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

Minutes of Third Quarterly Meeting, 1920.

The third quarterly meeting of the State Board of Health was held in the city of Topeka, in the offices of the secretary, on March 25, 1920.

The Board convened at eleven a. m., Dr. Clay E. Coburn, president, presiding.

Upon roll call the following members were present: Doctors Coburn, Entz, Clayton, Lerrigo, Aldrich and Axtell. Conferees present: Messrs. J. F. Tilford and Frank Rushton.

The minutes of the second quarterly meeting were read, and upon motion were approved and ordered placed on file.

The secretary then read his quarterly report, which upon motion was received and ordered to be placed on file.

Upon motion, a committee of three, consisting of Drs. H. L. Aldrich, J. J. Entz and C. H. Lerrigo, were appointed by the president to present resolutions for adoption, commending Senator Charles Curtis for his prompt action in securing the congressional sanction for the use of emergency hospital supplies. Accordingly, the committee presented the following resolutions, which were unanimously adopted and ordered to be spread upon the minutes of the meeting and a copy to be sent to Senator Curtis:

WHEREAS, The resources of the Kansas State Board of Health in its recent fight against influenza were splendidly augmented by authority of the War Department to use army beds and other supplies for emergency hospitals; and

WHEREAS, This authority, withheld at first, was given within twenty-four hours after appeal was made to Senator Charles Curtis, as a result of his personal interest and efficient action: therefore, be it

Resolved, That the Kansas State Board of Health, on behalf of the people of the state of Kansas, offers to Senator Curtis most cordial thanks for coming to the rescue in such a remarkably prompt and efficient manner.

The committee on reorganization of laboratories made a verbal report of progress, which was received, and upon motion the committee was continued.

Dr. Thomas F. Maher, representing E. R. Squibb & Sons, addressed the members of the Board briefly concerning his work in relation to the marketing of the Board of Health biological products in Kansas.

The chief engineer, Prof. C. A. Haskins, made a verbal report concerning the Division of Water and Sewage, and recommended the appoint-

ment of Eugene T. Cranch as assistant engineer of the State Board of Health, vice Francis Veatch, jr., resigned. Upon motion, Mr. Cranch was unanimously elected as assistant engineer for the remainder of Mr. Veatch's term.

The blanks used in the Division of Child Hygiene for carrying out the provisions of chapter 210, Session Laws of 1919, and formulated by the chiefs of divisions, upon the order of the State Board of Health at their first quarterly meeting, were upon motion unanimously approved.

The secretary then read a tentative draft of the constitution and by-laws of the Kansas Public Health Association, and upon motion the plan and proposal contained therein were unanimously approved.

The following bills were audited and allowed:

Dr. Clay E. Coburn	\$8.92
Dr. J. J. Entz	19.90
Dr. Ione Clayton	17.78
Dr. H. L. Aldrich	26.00
Dr. J. T. Axtell	17.69
J. F. Tilford	37.13
Frank Rushton	6.23

No other business appearing, upon motion the Board adjourned.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

ANNUAL MEETING, 1920.

Held in the offices of the Secretary, Topeka, Kan., June 23 and 24, 1920.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

HISTORICAL.

Sixteen years ago the first of July your secretary assumed the duties of executive officer of this Board, having previously served for three years as member of the Board. During this interval of time there has been a great forward movement in public-health work in this country, and we have been so fortunate as to have had a part in the development of public-health work, in some instances at least being the pioneers in certain lines of endeavor.

The development of the Kansas State Board of Health has kept pace with the development of public-health work throughout the country, and that development is, perhaps, best objectively indicated by referring to the personnel of the department and the appropriation for operating the department that was available sixteen years ago. The working force consisted of a part-time secretary and one stenographer, and the total appropriation for the work of the department was \$3,000 a year. To-day the full-time personnel of the department includes the executive officer, six division chiefs and forty-seven other employees, who are engaged in various activities relating to the several divisions, making a sum total of fifty-four. In addition there are in the Food and Drug Laboratories six part-time employees. This total does not include extra help which is employed from time to time. The appropriations have increased from \$3,000 a year to approximately \$100,000 a year, which sum includes Federal funds received from the government for venereal-disease-control work, and fees received in the Division of Vital Statistics and the Division of Water and Sewage Laboratory.

Sixteen years ago the only public-health law upon the statute book was the quarantine law, which was poorly enforced, and in many sections of the state not enforced at all.

The county health officers made quarterly reports to the secretary, which reports were practically worthless because of age and lack of complete data.

Each succeeding legislature sees some new public-health measures placed upon the statute book, so that to-day public-health legislation and public-health work in Kansas compares very favorably with that of most of the states.

A few years ago an appraisal of the public-health work of the various state boards of health was made under the auspices of the American Medical Association. Kansas had the distinction of having the highest

grade of any state in the Union, based on per capita appropriation for public-health work; and on the general character and quality of the work done stood in the second group of states—the first group comprising but three of the older states, Massachusetts, New York and Pennsylvania, each having large appropriations for public-health work.

Sometimes we are inclined to be impatient at the slow progress being made along many lines of public-health endeavor, and yet in looking back over the sixteen years which have just passed we are persuaded that very rapid progress has been made, with every reason to be encouraged for the future, and to be grateful to the members of the various legislatures which have made our progressive legislation possible.

The diseases that most quickly respond to and best reflect public-health activities, as expressed in a lower death rate, are typhoid fever, infant mortality and tuberculosis. These diseases had the following state rates in 1912, the first year of the operation of the vital-statistics law, versus rates for the year 1919, as follows:

	1912. Per 100,000.	1919. Per 100,000.
Typhoid fever	20.8	7.6
Diarrhoea and enteritis (under two years).....	45.2	25.0
Tuberculosis (all forms)	64.1	50.8

The above rates would seem to indicate that the people of Kansas have gotten the full worth of their money which has been spent for public-health work along these lines by the State Board of Health.

We are just beginning to appreciate the necessity and the value of full-time local health organizations, and when the time comes that each county will have a full-time health organization we can predict with a considerable degree of certainty that the death rates from our communicable diseases will be further very greatly reduced.

There are at the present time five full-time county health organizations and four full-time city health organizations, with prospects for several other counties adopting a full-time health organization at an early date.

REPORTS OF DIVISIONS

DIVISION OF COMMUNICABLE DISEASES. The past year has seen another, and we trust, the last, epidemic of influenza sweep over the state, with a large toll of human life, although not approaching in malignancy the epidemic of the fall of 1918 and winter of 1919.

Our knowledge concerning the cause and the methods of dissemination of this virulent pandemic disease is still so rudimentary and uncertain as to leave us almost helpless in the face of its contagiousness and malignancy. However, experience has taught us something, and by our extensive preparations to deal with emergency conditions we believe that human life has been saved and the malignant character of the epidemic perhaps somewhat modified.

Aside from the epidemic of influenza, the general health conditions throughout the state, as registered in terms of disease and death, have been highly satisfactory. This is particularly true in relation to the incidence of typhoid fever, for 1919 registered the lowest mortality

from typhoid fever ever obtained in this state, namely, 7.6 per 100,000 population.

We have added additional personnel to this division in the shape of a public-health nurse, Mrs. Estelle Patrick. We trust the time may come when the state department of health will have at its command a corps of well-trained public-health nurses, a number at least equal to one for each congressional district.

Doctor Tuttle will give a detailed report of the activities of this division for the past year.

DIVISION OF VITAL STATISTICS. With each succeeding year we become increasingly impressed with the value of the accumulating data gathered through this division. This appreciation is also being shared by the general public. The time is speedily coming when a special clerk will be required for making certified copies of births, deaths and marriages, which are being called for with increasing frequency.

The work of the division has grown to be so heavy that the marriage-license fee of fifty cents is no longer sufficient to properly finance the work of the division, hence the necessity of an appropriation of \$2,000 per year by the legislature. The marriage-license fee should be increased to at least seventy-five cents, which sum will more nearly meet the requirements of the division. It is recommended that the Board, by resolution, petition the legislature for an increase in the marriage-license fee.

Doctor Lerrigo will give a detailed report of the work of the division for the current fiscal year.

DIVISION OF WATER AND SEWAGE. The work of this division has been very heavy during the past year. The obstruction to public works, the result of war conditions, and the crippling of the division by the enlistment in the army of the chief engineer and several others in the personnel of the division, temporarily retarded the work, but the past year has seen an increasing volume of public work, particularly the installation of new water supplies and sewage systems.

A number of grievous problems have arisen, which seem to be almost impossible of solution. I refer to the serious water shortage occurring in a number of the larger cities in the eastern half of the state and the pollution of the natural waters of the state in the oil fields by the industrial waste from oil wells and refineries. It is altogether likely that the latter problem will not be adequately solved until additional legislation is secured that will more completely and fully meet the situation.

Our chief engineer will give a detailed report of the operation of this division.

DIVISION OF FOODS AND DRUGS. The work of food and drug inspection has offered no new or pressing problems during the past year. Perhaps the main matter of interest that should be brought to the attention of the Board is the fact that your executive officer has been sued in the United States district court by the Royal Baking Powder Company, and a temporary restraining order issued against the secretary from interfering with the sale of this company's new phosphate baking powder.

Judge Egan, the new attorney for the Board, is handling the case for the State Board of Health in a very satisfactory manner.

Mr. Rowland, the assistant chief, will give a detailed summary of the activities of this division during the past year.

DIVISION OF CHILD HYGIENE. The slow but certain fall in the death rate of infants under two years of age from diarrhoea and enteritis, which reduction is coincident with the establishment of a Division of Child Hygiene, must be the answer to those few who criticised the work of this division.

Dr. Florence Brown Sherbon, the present chief of this division, has undertaken an ambitious piece of work in her effort to make a child-welfare survey of the entire state. It yet remains to be seen how complete the survey will be and the measure of success achieved by her untiring efforts, but that good has already been accomplished there can be no doubt.

Probably the most important work of this division is the operation of the public health car "Warren," by which means personal and vital contact with the people of the state is secured, and a message of help and health is brought to the child, the mother, and the people in general.

The additional labor thrown on this division through the operation of the new law requiring the inspection of children's homes and maternity hospitals has required additional personnel, which work, together with the tabulation of the results of free dental inspections throughout the state, has made the work of this division particularly heavy.

It is sincerely hoped that increased appropriation for the conduct of this important work may be secured by the in-coming legislature.

Doctor Sherbon will give a detailed report of the activities of this division for the current year.

DIVISION OF VENEREAL DISEASES. The failure of the legislature to appropriate funds for the operation of this division for the year 1920 operated as a very great handicap for the division during the first three months of the present fiscal year, as we were then without Federal funds or state funds, excepting the \$5,000 that was taken from the budget of the Division of Communicable Diseases and given to the Division of Venereal Diseases. However, the special session of the legislature corrected this defect for the year 1921, which, with the aid of Federal funds, will give us ample means for carrying out our enlarged plans, including aid to clinics and a state-wide educational campaign. In the campaign against commercialized vice and prostitution it is hoped that at a future date a more detailed report of these activities may be submitted.

Doctor Kilbourne, chief, will give a detailed account of the work of this division for the past year.

LABORATORIES. After a careful study of the laboratory situation for a period covering the past six or eight months, and after going over the matter very carefully with the committee on reorganization of laboratories, we had about concluded that a reorganization of our present laboratories would be impossible because of lack of funds to

finance the same and lack of space and suitable location. About the time we had arrived at the above conclusion Dr. John Ferrell, representing the International Health Board, came to Topeka, and after a discussion of our laboratory situation kindly offered to send Colonel Russell, director of laboratories of the United States army, to Kansas for the purpose of studying our situation, and, after such study, of making a report covering recommendations, possibilities and requirements that would fairly and somewhat adequately meet the needs of a combined state laboratory for this department.

Accordingly, Colonel Russell made the visit, and his recommendations were, briefly, that the Wassermann and diagnostic laboratories should be combined and be located in Topeka, where it would be in actual and vital touch with the administrative office of the State Board of Health. For years our diagnostic laboratory has been located in the private home of our bacteriologist, Doctor Greenfield. It was manifestly impossible to combine the Wassermann and diagnostic laboratories in the small room in her home. Moreover, at about this time Doctor Greenfield informed your secretary that she wished to resign on the first of July, because she was contemplating matrimony.

It became necessary, therefore, to secure some suitable place where the laboratories could be united and operated in a fairly satisfactory way. No space being available in the statehouse, we knocked at the doors of Washburn College, and President Womer, upon consent of the board of trustees, has offered to furnish a room with heat, light and water for the operation of our laboratories. The board of trustees were specifically notified that such an arrangement was only a temporary one, until the matter might be approved by the legislature or some other suitable place found.

In the meantime the International Health Board offered to provide the salary of a director for the combined laboratory, if the State Board of Health would provide the additional personnel, such director to continue for one year or until the legislature would provide a suitable salary for a director. Accordingly, Dr. Kenneth F. Maxey has been selected as director for the new combined laboratory and is at work assembling and equipping the same at Washburn College.

It is recommended that the action of your committee on reorganization of laboratories and your executive officer in negotiations with the International Health Board be approved.

FULL-TIME HEALTH ORGANIZATIONS. There are at the present time five full-time county health organizations in the state, which include the counties of Cherokee, Geary, Marion, Butler and Ford. Several other counties are contemplating putting in full-time county health organizations. At the time of my conference with Dr. John A. Ferrell, of the International Health Board, the question of assisting counties which wish to put in full-time health organizations was discussed, and Doctor Ferrell expressed his willingness to provide assistance under certain specific conditions.

The principle involved in obtaining assistance from the International Health Board is that of a demonstration to show what full-time public-health work is and what it may be able to do to suppress disease and to

promote health. The general plan followed is that the county must provide for 50 per cent of the budget, the state 25 per cent and the International Health Board 25 per cent. In view of the inability of the state to provide the necessary 25 per cent, the International Health Board may, upon proper presentation of a promising case, provide the state's share.

It is recommended that the Board approve of the general principle involved of assisting or encouraging counties to provide full-time health organizations and authorize the executive officer to take such steps in promoting this policy as seems to be wise and expedient in each case.

DIVISION OF PUBLIC-HEALTH EDUCATION. The work of the Division of Public-health Education is, of course, closely related, if not really a part of each of the other divisions of the Board's work. Yet through the medium of the *Bulletin*, our monthly publication, with moving pictures, slides, lecture and special bulletins, a state-wide educational program is in continuous operation, which we believe is constantly sowing the gospel of good health and disease prevention which in years to come must be fruitful of good results. We are constantly in receipt of letters from various parts of the country expressing appreciation of the work of public-health education, all of which is encouraging. The occasional notes of objection are so rare and come from such sources of self-interest or prejudiced misinformation as to be unworthy of notice. It is to be hoped that our continued program of education will sometime convert even these misguided people.

ANNUAL SCHOOL FOR HEALTH OFFICERS AND PUBLIC-HEALTH NURSES. The Annual School for Health Officers and Public Health Nurses was held at the School of Medicine of the University of Kansas, at Rosedale, the week of May 10 to 15. The attendance of health officers was not as large as it should have been, but the attendance of public-health nurses was exceedingly gratifying. It was the general concensus of opinion that the school was very much worth while.

GENERAL. The outlook for public-health work in Kansas was never as promising as at the present time. The revelations of the war have emphasized as could not have been done in a decade the need of means and measures for the promotion of health and the prevention of disease. Far-visioned statesmen see, and many have voiced the sentiment of David Lloyd George when he declared that the strength of a nation is conditioned upon the health of the people, and that the success that attends a reconstruction period is always conditioned upon national vitality.

It is usually dangerous to predict events in the future, but if the interest in public health continues to increase in anything like the degree that it has in the past sixteen years, I am willing to predict that by the time another sixteen years have elapsed, full-time county health organizations will have been established throughout the state, and the incidence of mortality from communicable diseases will have been greatly reduced, and typhoid fever entirely and forever banished from Kansas.

Respectfully submitted. S. J. CRUMBINE, M. D.,

Secretary and Executive Officer.

Minutes of Annual Meeting, 1920.

The annual meeting of the State Board of Health was held in the offices of the secretary, Wednesday, June 23, 1920.

Upon roll call the following members were present: Dr. Clay E. Coburn, president, presiding; Doctors Lerrigo, Aldrich, Axtell, Earnest, Ewing and Walker; J. G. Egan, attorney for the board, Mr. Egan having taken the oath of office prescribed by the statutes.

The minutes of the third quarterly meeting were read, and upon motion approved and ordered placed on file.

The secretary's annual report was then read, whereupon the recommendations in the secretary's report were taken up for discussion. The report was approved and ordered placed on file.

Upon motion, a committee consisting of Doctors Aldrich, Earnest and Lerrigo was appointed by the president to make an investigation as to whether or not the marriage-license fees received by the Division of Vital Statistics are adequate to the financial needs of the division, and to make such suggestions and propose such legislation as it may find necessary and expedient, the committee to report at the next quarterly meeting.

Upon motion, the arrangements entered into with the International Health Board in relation to coöperation in county health work were approved, and the secretary instructed to see to the carrying forward of such plans as may be agreed upon by the International Health Board, the executive officer and the respective counties interested.

The secretary was instructed to give such press notices as might be appropriate concerning the history of the development of the State Board of Health during the past sixteen years.

The report of the standards committee was then received, whereupon regulation No. 11 of the food and drug laws was amended to read as follows:

ADULTERATION.

REGULATION 11. (b) The sale of slaughtered, undrawn poultry, game, or fish *at retail* is prohibited.

All the members of the Board present voting in the affirmative, it was ordered to be published in the official state paper.

Upon motion, all the members of the Board present voting in the affirmative, the regulation relating to the candling of eggs was amended to read as follows:

EGG-CANDLING REGULATION.

All buyers of eggs, except the consumer, shall candle every lot of eggs bought except those eggs that have been previously candled and maintained at a temperature of 40 degrees F. or below: *Provided*, That eggs that are produced between the first day of January and the *fifteenth* day of May are not required to be candled.

It was ordered published in the official state paper.

The report of the special committee on reorganization of laboratories was then made, and upon motion the action of the committee in entering into an agreement with the International Health Board and Washburn College was unanimously approved, all members of the Board voting in

the affirmative. This agreement provides that the International Health Board shall provide the salary of a director of the combined Wassermann and diagnostic laboratories at Topeka until the legislature makes provision for such salary, or for the period of one year from date, Washburn College agreeing to provide a room and light, heat and water free of expense to the state in consideration for certain privileges accorded a selected group of students of Washburn College in training as technicians and the giving of a minimum amount of lectures to classes in bacteriology.

The report of the chief of the Division of Communicable Diseases was then read, and upon motion ordered to be placed on file. The report follows:

Annual Report, Communicable Disease Department.

During the year ending May 30, the work of the Communicable Disease Department has been carried forward along the lines heretofore adopted.

TYPHOID VACCINATION CAMPAIGN.

During the summer of 1919 an energetic typhoid vaccination campaign was instigated, to the end that more or less active efforts at antityphoid vaccination were undertaken in thirty-six counties in the state. The antityphoid vaccination campaign not only resulted in the administration of the vaccine, but in educational propaganda that undoubtedly resulted in improved sanitary conditions in the counties where the campaign was undertaken.

Whether due to the campaign or whether purely accidental, it is a fact that the records for 1919 show less typhoid fever in the state than during any previous year, there being but little more than half as many cases reported as during the previous year and even greater reduction in the number of deaths reported.

COMMUNICABLE-DISEASE REPORT.

The number of cases of the various communicable diseases reported corresponds very closely with the record of typhoid fever, with the single exception of diphtheria, this disease having exceeded the record of the previous year or two. In hunting for the fundamental reason for the reduction in the number of diseases reported during 1919, it becomes apparent that this reduction is largely due to the efforts made to suppress or retard the spread of influenza during the winter of 1918 and 1919. This condition is found to exist not only in Kansas, but throughout the United States, and thus demonstrates the hypothesis that in making an energetic fight against any communicable disease we have a direct influence on all other communicable diseases. That the reduction in cases reported is not a result of failure on the part of the physicians to report as completely as during former years is demonstrated by the fact that the case fatality was no higher in 1919 than during any previous year.

INFLUENZA OUTBREAK.

During September of 1919 the number of cases of influenza reported showed a sharp rise. In some counties this rise was so marked as to indicate the start of the real epidemic of this disease. However, the outbreak was very short-lived and in no locality reached epidemic proportions. In the latter part of November, December and January there was an outbreak in the state of an enteric disease which was designated as "winter cholera." This disease was much more prevalent in the city of Topeka than it was in other points, though it assumed quite great proportions at Lansing and numerous cases were reported from widely scattered points in the state. Following the outbreak of so-called winter cholera, we were confronted with a true outbreak of influenza the latter part of January. A full study of influenza in Kansas from the fall of 1918 to the end of March, 1920, is set forth in the biennial report submitted to your secretary.

INFLUENZA VACCINE.

During the outbreak of influenza in 1920 the health officers of the state were offered Rosenow vaccine by the State Board of Health. In some localities it was used fairly extensively; in others it was not used at all. How much influence it had in preventing pneumonia is a moot question. The reports submitted by those who used it in the state were so incomplete as to render them of no value whatsoever, while reports from other

states differ so widely as to render the question decidedly unsettled. As a matter of fact, we know about as little with regard to the etiology and epidemiology of influenza to-day as we knew two years ago, and owing to the inclination of our government (city, county, state and national) to provide funds for operating only when sickness is present, and to absolutely cut off any support whatsoever for the study of the epidemiology of the disease after an epidemic has passed, renders it very probable that we will meet our next epidemic (probably twenty or thirty years hence) with as little knowledge of the true nature of the disease as we had when we confronted the epidemic in the fall of 1918.

ENDEMIC INDEX.

During the last year the records have been studied and an endemic index for the principal communicable diseases has been worked out for each county and principal city in the state. While an endemic index may be of value in large cities or very thickly settled communities, it is, in my estimation, of little or no value in a thinly settled community. In fact, it is my belief that if relied on as a guide for energetic public-health work in sparsely settled communities it will prove a detriment rather than a benefit in the prosecution of public-health efforts. It is my candid opinion that the endemic index is a fad that will be very short-lived, and will shortly be looked upon as one of the freaks in public-health efforts. The working out of the index consumed a large amount of time and proved a rather large undertaking. However, the effort was probably worth while, as each state must learn for itself and by its own experience the value of any public-health agency that may be promulgated.

REPORT OF COMMUNICABLE DISEASES.

A study of several hundred death reports shows that in regard to typhoid fever, diphtheria, scarlet fever, measles and whooping cough, only about 51 per cent of the cases in which these diseases were given as the direct or tributary cause of death had been reported, and in tuberculosis only 30 per cent of the cases in which the primary or tributary cause of death was given as tuberculosis had been reported. It has been found by the Census Bureau that if we find the per cent of babies that die under one year of age and for which birth certificates have been signed, we have a very close approximation of the per cent of all births that are recorded. I do not know of any method whereby we could determine the relation between unreported cases of communicable diseases that die and are not reported, and the number of all cases of communicable diseases that are reported, but I think it safe to assume that where only 51 per cent of the cases that die from communicable diseases have been reported, that not more than 51 per cent of all cases of communicable diseases are reported. I doubt if other states have much more complete reporting of communicable diseases than has Kansas, but it is rather discouraging to be confronted with such evident negligence on the part of the medical profession as a whole.

RECOMMENDED CHANGES IN RULES.

I have the honor to recommend that rule 1, group 1, be amended as follows: Following the word "pneumonia," strike out the words "acute lobar" and insert in lieu thereof the words "all forms."

This report is intentionally made brief, as the matter is covered in more detailed form in the biennial report submitted to your secretary, and it is not deemed advisable to consume more of your valuable time when the full report will probably be shortly published.

On the recommendation of the epidemiologist, that the regulation designating the communicable diseases that are dangerous to the public health and providing for the reporting and notification of same, as found in group 1 of rule 1, part 1, be amended by striking out the words "acute lobar" after the word "pneumonia," and substituting therefor the words "all forms," all members of the Board voted in the affirmative and the rule was changed as ordered.

The report of the chief of the Division of Vital Statistics was then read, and upon motion ordered placed on file. The report follows:

To the State Board of Health:

GENTLEMEN—The year 1919 presents an excellent record of mortality statistics for the state of Kansas. The crude death rate, which is 10.9, is a lower death rate than we ever expected to have in this state again. I quote from the biennial report for 1916-1917: "It

is the belief of the acting state registrar that all three of the causes have operated to bring about the increasing death rate for Kansas, and he further expresses the belief that a death rate of 11 or lower per 1,000 will never again be recorded in this state, and it is doubtful if it ever will be below 12."

It is a matter of very great interest to review the death rates of the principal causes of death for 1919 and the three years preceding, since they serve to show that we have not only the decided improvement over 1918 that might reasonably have been expected, but also a marked improvement over the two years preceding.

Many persons have expressed theories to account for this great improvement. As a matter of interest, I include in this report three of the most common:

1. Influenza removed the physically unfit in 1918. This does not necessarily mean the aged. The percentage of old persons dying in 1918 was not unusual.

2. Knowledge of the principles of public health has been gradually growing for years. The influenza crisis brought it home to the people and made it operative.

3. The influenza epidemic instilled the fear of diseases into the hearts of people, so that doctors were called more readily; quarantines were put on at the least provocation; what with quarantines and coal shortages, individuals were shut up to themselves much more than common; and enough doctors had returned from the army to relieve the over-worked medical forces of Kansas.

A fourth reason that might also be given some weight is the principle that the rate for any single year is in itself of little value, being subject to certain things that may cause a departure from the law of averages, and that no table of rates can be considered reliable excepting as they are extended over a period of several years.

As you consider the table for the years 1917, 1918 and 1919 that I present herewith, you may decide for yourselves which, if any, of these reasons are applicable:

COMPARISON OF DEATH RATES of certain common classifications, based on number of deaths per 100,000 of population.

	1916.	1917.	1918.	1919.
Pneumonia	100.4	128.8	848.9	180.6
Influenza	27.0	24.8	150.0	74.8
Organic heart disease	108.9	112.4	102.1	85.0
Cerebral hemorrhage and paralysis	94.1	95.4	96.1	92.8
Bright's disease	76.6	88.6	75.2	66.4
Cancer	71.2	70.6	73.1	69.7
Tuberculosis	56.4	58.6	59.9	50.8
Diarrhoea and enteritis (under two years old)...	46.8	45.8	30.6	25.0
Typhoid fever	15.8	19.2	16.4	7.6
Diphtheria	11.3	8.9	7.5	10.8
Suicide	10.6	9.5	12.4	12.1
Homicide	8.5	6.2	5.4	6.8

It should be borne in mind that the deaths from influenza did not affect old persons in a disproportionate degree, so that the diseases common to old age are not unusually disturbed as to their rates.

It is hard to explain the great drop in deaths from diarrhoea and enteritis by anything but an increase in health knowledge. The drop in typhoid, too, one might reasonably credit to public-health agencies, one of which no doubt is increased vaccination, a certain proportion being among men who were vaccinated in their army service.

Deaths from suicide and homicide are not changed materially, there being a slight increase in the suicides and the homicides remaining about normal. From the many theories advanced that the horrors of war have given the public a lower appreciation of the value of human life, one might have supposed that suicides and homicides would have made a very marked increase.

One of the most striking and explicable problems arising from a survey of the mortality rates of 1919 as compared with previous years is found in that common disease, measles. To get a comparison that will be as helpful as possible, I will begin with the year 1912, which has a death rate of 2.5. That fluctuated annually as follows: 1913, 5.9; 1914, 4.2; 1915, 3.9; 1916, 9.2; 1917, 15.8; 1918, 18. In 1919, after all these varied rates, we sink to the remarkable rate of 0.68, which means that in the great state of Kansas during the whole of the year 1919 there were only twelve persons who died of measles. Whether to give the credit to the education in health, to the closing of schools, churches and movies by coal strikes and quarantines, or to the beneficent influence of the State Board of Health, I will not attempt to decide.

Kansas did very well also in reference to births for the year 1919, in view of the fact that our army was scarcely demobilized until well past the first half of the year. The total number of births was 37,146, giving us a birth rate of 21.1, which is not greatly below the average rate for the past eight years. The infant mortality rate for the year is also very creditable, being 68.5. This rate for 1918 was 78.5 and for 1917 it was 77. While this rate still seems very high, it is much lower than that recorded by the birth registration area as a whole. We do not have the 1919 figures, but the figures for 1917 give a rate for the area of 94. I use these in preference to a comparison to the 1918 figures, which are abnormally high, being 101.

Our records show that there were 20,444 marriage licenses issued in the year and that we received as fees from marriage licenses and certified copies of same, \$10,458. Under the present law we are not allowed to spend more than \$9,000 of our marriage-license fees for the payment of salaries for the Division of Vital Statistics, so that there is a small unexpended balance which we are still carrying. When this balance increases to a sufficient amount it can be used to great advantage in supplying a desirable certificate of birth to every child born in the state. Before we can do this, however, we must also have some provision made for extra salaries, as the labor involved in the performance of this very desirable work should entail the employment of additional clerical help.

It is my opinion that the presentation of an attractive certificate of birth to every child registered with us would be one of the most practicable methods of insuring the complete and prompt reporting of all births occurring in this state.

Expenditures of this division for the calendar year 1919: For salaries, \$8,653.13; expenses, \$501.46; making a total of \$9,154.59.

The chief engineer then made his annual report for the Division of Water and Sewage, which upon motion was received and ordered placed on file. (See report of Division Water and Sewage.)

After a somewhat extended and free discussion of the situation that many of the cities in central and southeastern Kansas find themselves in relation to their water supply, upon motion, the president was authorized to appoint a legislative committee to investigate conditions in relation to the pollution of the natural waters of the state and to suggest appropriate legislation to prevent the natural waters of the state used as domestic water supplies from being grossly polluted with oil-well and refinery waste; whereupon the president appointed the following committee: Doctors Axtell, Aldrich and Crumbine, and Mr. Haskins and Mr. Egan. Upon motion, this committee was further instructed to prepare legislation making it possible for cities to vote bonds for sewage treatment where such cities are already bonded to the limit now fixed by law.

Upon motion, the committee was further instructed to prepare a memorial to the University of Kansas requesting that institution to cooperate with the State Board of Health in providing for a school of instruction for operators or superintendents of waterworks, purification plants and sewage-purification plants. Upon motion, the committee was further instructed to suggest some means or measures whereby superintendents of water-purification plants and sewage-purification plants would be properly instructed.

The secretary then read the resignation of the chief engineer, which is as follows:

TOPEKA, KAN., June 28, 1920.

Dr. S. J. Crumbine, Secretary, State Board of Health, Topeka, Kan.:

DEAR DOCTOR CRUMBINE—It is with sincere regret that I hand you herewith my resignation as chief engineer and director of the Water and Sewage Laboratories for the State Board of Health, to take effect not later than August 1, 1920.

During the nine years which I have been connected with this Board I have never failed to receive coöperation and backing to the fullest extent, and, therefore, to the Board, but more particularly to you, for the many kind and generous acts and expressions of confidence, I desire to express my sincere appreciation.

Very respectfully yours,

CHAS. A. HASKINS.

Whereupon, the resignation, upon motion, was accepted, and the secretary and president were instructed to submit suitable resolutions in recognition of Mr. Haskins' splendid service to the state as engineer.

Prof. N. P. Sherwood then made a report on influenza investigation, which was listened to with a great deal of interest by the members of the Board.

The assistant chief food and drug inspector then made his annual report for the Division of Foods and Drugs, which, upon motion, was received and ordered placed on file. (See report of Division of Foods and Drugs.)

Mr. Bantleon, of the bureau of repressive measures, then made a brief report, which was received and ordered placed on file. (See report of Bureau of Repressive Measures, Division of Venereal Diseases.)

The report of the bacteriologist was received and ordered placed on file. The report follows:

TOPEKA, June 26, 1919.

Annual report of work done in the laboratory:

Total number of specimens examined.....	2,916
Total specimens of sputum	1,245
Specimens showing the tubercle bacillus.....	282
Total specimens of suspected diphtheria.....	1,129
Number showing Klebbs-Loeffler bacillus	208
Total number of Widal reactions.....	370
Number giving a positive reaction.....	56
Total number of specimens examined for gonorrhœal infection.....	140
Number showing the diplococcus of Neisser.....	42
Number of specimens examined for rabies.....	18
Number of specimens showing the negri bodies.....	7
Specimens of spinal fluid examined.....	10
Specimens showing the micrococcus intercellularis.....	8
Specimens of tissue examined	4

Respectfully submitted.

SARA E. GREENFIELD.

The reports of the directors of the Food and Drug Analyses Laboratories were then received and ordered placed on file. (See report of Division of Food and Drugs.)

MISCELLANEOUS BUSINESS. The secretary alluded to the new uniform rules and regulations on railroad sanitation, which were recommended to be adopted by all states for the purpose of having nation-wide uniform regulations. Upon motion, the proposed regulations were referred to a committee composed of Doctors Earnest, Ewing and Walker, to confer with the executive officer, who should formulate a final report and report at a subsequent meeting of the State Board of Health.

Upon motion, the plans formulated for a state-wide educational program in venereal-disease control and social-hygiene education were approved, including the service of Miss LoRee Cave as an instructor among high-school girls of the state, all the members of the Board voting in the affirmative.

The next thing in order being the election of officers, the following officers were elected:

President for the ensuing year, Dr. O. D. Walker.
Vice president for the ensuing year, Dr. W. M. Earnest.
Secretary for a term of four years, Dr. S. J. Crumbine.
Chief engineer, succeeding Prof. C. A. Haskins, Albert H. Jewell.
Assistant engineer, A. H. Wieters.
Bacteriologist from June 1 to January 1, 1921, Dr. Kenneth F. Maxcy.

Upon motion, the committee on laboratory reorganization was authorized to secure a successor for Doctor Maxcy to fill out the unexpired portion of the year.

Division chiefs were elected as follows:

Division of Communicable Diseases and Sanitation, Dr. T. D. Tuttle.
Division of Venereal Diseases, Dr. B. K. Kilbourne.
Division of Child Hygiene, Dr. Florence Brown Sherbon.
Division of Foods and Drugs, F. E. Rowland.

Upon nomination, the following conferees were elected to serve during the ensuing year: Mr. J. F. Tilford, Mr. Frank Rushton, Prof. C. A. Haskins.

Upon motion, the following bills were audited and allowed:

Dr. Clay E. Coburn	\$12.82
Dr. H. L. Aldrich	26.18
Dr. J. T. Axtell	18.81
Dr. W. M. Earnest	19.49
Dr. C. H. Ewing	28.44
Dr. O. D. Walker	43.28
Mr. Frank Rushton	1.84

No further business appearing, the Board, upon motion, adjourned.
Respectfully submitted. S. J. CRUMBINE, M. D., *Secretary*.

DIVISION REPORTS.

DIVISION OF COMMUNICABLE DISEASES AND SANITATION.

Dr. S. J. Crumbine, Secretary of State Board of Health, Topeka, Kan.:

DEAR DOCTOR—I have the honor to hand you herewith report of the Communicable Disease Division of the Kansas State Board of Health for the two years ending June 30, 1920.

Respectfully submitted.

T. D. TUTTLE, *Epidemiologist.*

GENERAL STATEMENT.

The work of the Communicable Disease Division embraces the tasks of trying to find and to eliminate the sources of infection from communicable diseases; of locating and eliminating, when possible, insanitary conditions that may result in disease; of encouraging the use of vaccines and other preventive agencies and seeing that such products are available for use by the public; supervising the enforcement of public-health laws and the rules of the State Board of Health; supplying information regarding the prevention of disease through public talks, distribution of literature, etc., and receiving, compiling, tabulating and studying reports of communicable diseases from all parts of the state.

During the two years embodied in this report the entire country was confronted with an outbreak of influenza that vied with the "plagues" of ancient history. Probably, on account of the heavy travel incident to a state of war, the disease spread throughout the country with a rapidity never known before. So severe was this disease that business became paralyzed, doctors and nurses were submerged with work, health departments were swamped, and in some localities the use of the steam shovel became necessary in order to bury the dead.

Confronted with such conditions, the health departments resorted to every method known to science (and to many that were not known) to prevent or retard the spread of the disease. It is a well-established fact that we are frequently quite unable to prevent the spread of certain diseases, but we are able to retard the rapidity of its progress, and as the disease becomes less fatal toward the end of an epidemic, lives are saved by this "slowing-down process." The progress of the disease in Kansas is dealt with more fully under the title "Influenza."

Without regard to what influence the various precautions against influenza may have had on the specific disease, it is quite evident, as shown by the cases reported and by the mortality records, that these very efforts resulted in a great reduction in all other communicable diseases, thus demonstrating the hypothesis that an energetic fight against any one communicable disease has an equal influence on all other communicable diseases.

PROFIT AND LOSS IN PUBLIC-HEALTH WORK.

The question, Does public-health work pay? is sometimes asked. To place a value on human life appears "cold-blooded," and yet it has a value as based on a purely commercial or profit-and-loss basis. Doctor Fisher, of Yale University, has made extensive studies on this subject, and has shown, beyond reasonable doubt, that the average human life has a value of \$5,000 as based on a strictly business basis. Therefore, if it can be demonstrated that public-health work has prevented a single death, it must be credited with the value of that life. As public-health work does not save lives by the treatment of disease, but by the prevention of the disease, if it can be shown that a single case of any disease is prevented, the work is justly entitled to credit for the loss of time, doctors' fees, nurse hire, etc., incidental to such disease.

The value of human suffering has never been determined, but every case of typhoid fever costs, in loss of time, doctors' fees and nurse hire, at least \$300. Therefore, every time a case of typhoid is prevented this amount is saved. While we use the standard, \$300, as the cost of a case of typhoid, attention is invited to the fact that this estimate was made at a time when the average earning capacity of an adult was \$3 per day. As the cost of living has increased, so has the cost of being sick increased.

Public-health work has a cumulative effect; that is, the results are not immediately apparent, but may be delayed for months, or even years. The work against typhoid fever started several years ago, and that showed but little effect for three or four years, is now giving its full results, to the end that the incidence of the disease and deaths therefrom in this state are only about half of that shown eight or ten years ago, and this reduction in suffering and death will continue and increase so long as equally energetic efforts are maintained, but if these efforts are discontinued or reduced the old disease incidence and death rate will be reestablished.

The legislatures have appropriated considerable money for public-health work in the state. They will be asked to appropriate more. They will inquire as to the returns on previous investments. We hesitate to submit the evidence of returns as shown by a single disease, lest we be cited to appear for "profiteering." However, going only as far back as 1914—and even then the fight against typhoid fever had begun to have its influence—and comparing the cases and deaths with those of 1919, charging the State Board of Health with the appropriation for the Communicable Disease Division and giving it credit by sickness prevented and lives saved, we find that in 1914 there were 338 deaths from typhoid fever reported, while in 1919 there were only 135 such deaths. We are therefore entitled to a credit for preventing 203 deaths from typhoid fever in 1919. During 1914 there were 1,684 cases of typhoid fever reported, while in 1919 there were only 836 such cases reported; hence we are entitled to a credit for preventing 848 cases, with the consequent suffering and expense.

This saving reduced to dollars and cents gives the following results:

ACCOUNT OF THE STATE BOARD OF HEALTH WITH THE STATE OF KANSAS.

	Debits.	Credits.
To epidemiologist's salary	\$3,300	.....
To stenographer's salary	900	.....
To research fund	10,000	.....
By 203 lives, at \$5,000 .....	.....	\$1,015,000
By 848 cases, at \$300 .....	.....	254,400
	<hr/>	<hr/>
	\$14,200	\$1,269,400
Deduct		14,200
		<hr/>
Net profit		\$1,255,200
Per cent profit		8,839

In giving the above results we have used only the cases and deaths actually reported. The death returns were probably quite complete in both years, but it is a well-known fact that the case reports are not complete in either year, but were much more nearly complete in 1919 than they were in 1914. We know that the fatality in typhoid fever does not exceed ten per cent, hence we should have reported at least ten cases for every death. On this basis we should have reported 3,380 cases in 1914 and 1,350 cases in 1919, thus indicating the prevention of 2,030 cases in 1919, with a saving of \$609,000, instead of 848 cases and \$254,400 as given above.

The above figures deal only with one disease. Lives have been saved and cases prevented in other preventable diseases. In addition to this, much has been saved to the people of the state through the contract with the manufacturers for furnishing biological products.

BIOLOGICAL PRODUCTS FURNISHED IN 1919.

	Usual price.	Contract price.
Diphtheria antitoxin—1,000 units	\$1.50	\$0.50
Diphtheria antitoxin—3,000 units	3.00	1.30
Diphtheria antitoxin—5,000 units	4.50	1.90
Diphtheria antitoxin—10,000 units	7.50	3.10

In many instances other products than those contracted for were used and the "usual" prices paid. No one will question the standard of E. R. Squibb & Son's products, and when more than the above-quoted prices are paid for antitoxins the purchaser is not getting the full benefit of returns available as a result of the taxpayers' investment in the state health department.

Large quantities of other biological products have been furnished free of charge to the people, or at greatly reduced prices. Especially is this true with regard to typhoid vaccine, but as typhoid vaccine is used to prevent typhoid fever, its free distribution is a part of the campaign against this disease, the results of which have been set forth above.

FIELD INVESTIGATION.

During the year ending May 31, 1920, the following cities and counties were visited:

Account of typhoid fever. Counties: Bourbon, Crawford, Douglas, Ellis, Elk, Greenwood, Leavenworth, Miami, Wilson. Cities: Kansas City, Fort Scott, Pittsburg.

Account of diphtheria. Counties: Butler, Cheyenne, Ellis, Rawlins, Thomas.

Account of scarlet fever. Counties: Finney, Hamilton, Miami.

Account of smallpox. Counties: Dickinson, Hodgeman, Leavenworth, Pawnee, Phillips.

Account of infantile paralysis. Counties: Dickinson, Osage, Shawnee (Auburn city), Sherman.

Account of influenza. Counties: Cowley, Dickinson, Edwards.

Account of whooping cough. Chase county.

Account of pellagra. Leavenworth (two visits).

Account general sanitation. Counties: Atchison, Barber, Cherokee, Harper, Labette, Leavenworth, Riley (two visits), Sedgwick, Sumner, Wabaunsee. Cities: Kansas City, Wichita.

Account public meetings. Counties: Gray, Harvey, Norton, Phillips, Riley, Rush, Sedgwick, Sumner, Wabaunsee. Cities: Kansas City, Rosedale.

The field work covered general investigation into existing insanitary conditions, hunting out unreported cases of communicable diseases, encouraging campaigns for vaccination against typhoid fever, investigation of failures to comply with public-health laws, delivering talks before public gatherings, meetings of physicians, meetings of health officers, etc.

This work occupied a period of ninety-seven days and covered practically the entire state, at a total cost of \$590.16.

INSPECTION OF SCHOOLS BY COUNTY HEALTH OFFICERS.

The rules and regulations of the State Board of Health require that all school buildings be inspected, by the county health officers in their respective counties and by the city health officers in cities of the first class, during the vacation period of each calendar year. This regulation has not been thoroughly complied with by the health officers of the state. In some instances the health officers make the excuse that the county commissioners refuse to pay for such inspections or to allow the expenses incurred. In instances where the health officer is under contract to perform his duties on a piece basis—that is, paid so much for each inspection—refusal of the county officers to allow pay for the school inspections would relieve the county health officers of the responsibility. But where the county health officer is under contract “to perform the duties of the county health officer” at a specific annual salary, the question of extra pay for school examination does not enter the case, as examination of the schoolhouses is as much a duty of the health officers as any other function required of them.

In the spring of 1919 letters were sent to all health officers, calling their attention to the regulation requiring inspection of schoolhouses, but reports have been received from only thirty-seven counties and three of the first-class cities. The counties and cities reporting are as follows:

Counties: Allen, Brown, Cherokee, Cheyenne, Clay, Crawford, Doniphan, Ellis, Ellsworth, Graham, Gray, Harper, Jefferson, Jewell, Kearny,

Kingman, Lane, Marion, Marshall, Miami, Mitchell, Morris, Neosho, Osborne, Ottawa, Pottawatomie, Rawlins, Rice, Saline, Sedgwick, Sheridan, Sumner, Wabaunsee, Wallace, Wichita, Wilson, Woodson.

First-class cities: Parsons, Coffeyville, Topeka.

I have tabulated the results of these examinations showing the conditions complained of from only two standpoints, namely, the condition of the toilets at the schoolhouses, and the condition of the water supplies. A total examination of 2,596 schools is shown in the reports.

COMPLAINTS MADE.

Insanitary toilets, 1,921, or 74 per cent; insanitary water supplies, 200; toilet and water facilities satisfactory, 613. This condition indicates the importance of school inspection and also indicates that the State Board of Health should be given unqualified authority to require the school board of every school in the state of Kansas to put the school buildings and accessories in a clean and sanitary condition, to the end that the health of the children may be protected.

COMMUNICABLE DISEASES.

TYPHOID FEVER.

The figures for 1919 show a most gratifying culmination of the fight waged against this disease during the last decade. In 1919 we find the cases reported reduced to 836 and deaths to 135. We realize that there should have been reported at least 1,350 cases, though a 16 per cent fatality in typhoid indicates a fairly good report, but we hope by persistent inquiry, and occasionally more stringent measures, to so improve the reporting that the case fatality will not exceed 10 per cent.

In tables I and II the cases reported from counties and first-class cities are tabulated according to age distribution, with annual endemic index and variation therefrom.

In tables III and IV cases are tabulated by cities and counties according to the monthly occurrence of the disease with annual case rate per 1,000 population.

In table V we present a comparative study for six years, showing cases reported, deaths and case fatality in counties and cities.

TYPHOID VACCINATION CAMPAIGN During the summer of 1919 an energetic typhoid vaccination campaign was put on in the state, the State Board of Health offering to furnish typhoid vaccine free of charge to the health officers in the counties, with the coöperation of the physicians and health officers, administering vaccine to any person, free of charge, applying for the same on specified dates. Vaccination was offered free of charge without regard to any person's ability to pay for the same.

Poor people can at any time receive vaccination, without charge, by the county health officer, or by the family physician, if the physician is willing to administer the vaccine, the State Board of Health having made arrangements with druggists throughout the state to furnish vaccine free of charge to physicians on the condition that such vaccine is to be administered free of charge to the patient.

During the vaccination campaign vaccination was offered free of

charge without regard to ability to pay. In many of the counties the results were very encouraging, many of the people taking advantage of the opportunity to receive immunization against typhoid fever. The inclination of the people to take advantage of this offer seems to have been influenced to a considerable extent by the publicity given to it by the respective county health officers.

More or less active campaigns were put on in the following counties and first-class cities:

Counties: Allen, Anderson, Bourbon, Butler, Chase, Clay, Comanche, Crawford, Doniphan, Ellis, Ellsworth, Finney, Ford, Graham, Greeley, Greenwood, Lincoln, Logan, Marion, Meade, Montgomery, Nemaha, Neosho, Ottawa, Pawnee, Saline, Washington.

Cities of first class: Pittsburg, Coffeyville, Kansas City, Topeka, Wichita.

In addition to the above counties and first-class cities, we received requests from a number of county health officers asking that they be supplied with typhoid vaccine for the purpose of administering to the poor people who might apply for vaccination, but at the same time refusing to put on an active typhoid vaccination campaign in their respective counties. This request was invariably refused on the ground that any health officer or any physician willing to administer the vaccine could secure for himself or the patient sufficient vaccine from the druggist in the community without charge either to the physician or patient, the State Board of Health paying the cost of such vaccine so supplied.

To the health officers of the above-named counties a total of 16,380 cc. of typhoid vaccine was distributed. In addition to this there was sent to various state institutions 10,260 cc. of typhoid vaccine for administration to inmates of such institutions.

There was distributed in 1919 sufficient vaccine to immunize 10,352 persons. This vaccine would have cost at retail \$5,176, but under the contract which the State Board of Health has with the manufacturer, it actually cost the state \$1,511.80, thus making a saving of \$3,664.20, and in addition it must be remembered that this vaccine was administered by the health officers and physicians of the state without charge to the patient, for which services the people may thank the physicians for saving them an expense of \$31,056.

The typhoid vaccination campaign had an additional influence which cannot be estimated from a monetary standpoint. This influence is the result of the educational propaganda which accompanied the vaccination campaign and which resulted in the improvement of sanitary conditions throughout the state. How much of the result was due to vaccination and how much to improved sanitation we are unable to say, but we do know beyond any question that the typhoid fever death rate in Kansas in 1919 was only about one-half of that shown for previous years.

SMALLPOX.

This disease has assumed an extremely mild form during the last few years, thereby making its eradication or control very difficult. The "woods are full" of mild cases of this disease. Not infrequently children

are found in school with a well-marked case, while it is quite common to find them returning to school after a few days' absence with no idea that they have had anything more serious than a "few ordinary pimples," evidence of which is still apparent to the most casual observer.

In the majority of instances no physician is called, and frequently the householder does not suspect the nature of the disease; but in communities where it is known that smallpox exists, we are forced to believe that in some instances the householders have at least a very strong suspicion as to the nature of the disease, and from purely selfish motives send the children to school and expose others to a disease that may at any time assume the most malignant form. Even in cases where physicians are called to see the patient, we find that "the case was seen only in the pre-eruptive stage and no diagnosis made," or a diagnosis of "post-influenza eruption" or "Cuban itch" is made. Such diagnoses not only result in the spread of disease, but make us wonder how it happens that the ancient idea of a "hoodoo working on the patient" is no longer used.

In tables VI and VII cases reported from counties and first-class cities are tabulated according to age distribution, together with the annual endemic index.

In tables VIII and IX cases reported from counties and first-class cities are tabulated according to the month in which the disease occurred, together with the annual number of cases per 1,000 population.

DIPHTHERIA.

With the exception of 1918, when the disease reached a low level in the state, as a result of the fight waged against influenza, diphtheria has shown but slight variation during the last six years.

We believe that if a culture were made from the throats of school children immediately on opening of school each year and all carriers eliminated, this disease would be almost wiped out of existence. We cannot hope to accomplish this, however, until all parts of the state have active, full-time health organizations, including full-time health officers and a corps of properly trained public-health nurses, and with this force in the field it will be necessary to very materially increase the state laboratory facilities.

In tables X and XI cases reported from counties and first-class cities are tabulated according to age distribution, together with the annual endemic index.

In tables XII and XIII cases reported from counties and first-class cities are tabulated according to the month in which the disease occurred, together with annual number of cases per 1,000 population.

In table XIV we present a comparative study for six years, showing number of cases reported, the number of deaths and the case fatality.

SCARLET FEVER.

There has been no marked change in the scarlet fever situation. The disease has not assumed any unusual proportion during the last six years, neither has it been reduced to any specially low point, except in the fall and winter of 1918-'19, which reduction can be attributed only to the strenuous efforts made at that time to prevent the spread of influenza.

In tables XV and XVI cases reported from counties and first-class cities are tabulated according to age distribution, together with the annual endemic index.

In tables XVII and XVIII cases reported from counties and first-class cities are tabulated according to the month in which the disease occurred, together with annual number of cases per 1,000 population.

In table XIX we present a comparative study for six years, showing number of cases reported, the number of deaths and the case fatality.

MEASLES.

During 1917 and 1918 measles ran rampant in the state. By many it was considered as a harmless disease, something to "have and be done with," and "the sooner over with the better," and yet we find that measles actually killed 275 people in this state in 1917 and 312 in 1918. These deaths do not include the large number that died from diseases resulting directly or indirectly from measles, nor do they take into account the deafness, blindness and other deformities that result from this so-called "harmless" disease.

The statement that "measles, whooping cough and other spray-borne diseases, to which practically every one is susceptible, cannot be prevented," is flatly contradicted by the results of the fight against influenza, as demonstrated by the great reduction in these "harmless" diseases in the fall and winter of 1918-'19. In fact, we cannot observe the great reduction in all communicable diseases in the fall and winter of 1918-'19—a reduction due solely to the fight against influenza—without having forced home the realization that all these diseases can be kept at an equally low stage by intelligent, energetic public-health efforts supported by public sentiment.

In tables XX and XXI cases reported from counties and first-class cities are tabulated according to age distribution, together with the annual endemic index.

In tables XXII and XXIII cases reported from counties and first-class cities are tabulated according to the month in which the disease occurred, together with annual number of cases per 1,000 population.

In table XXIV we present a comparative study for six years, showing number of cases reported, the number of deaths and the case fatality.

OTHER COMMUNICABLE DISEASES.

Other communicable diseases studied by the division are tuberculosis, pneumonia, chicken pox, German measles, whooping cough, mumps, meningitis, infantile paralysis, malaria and pellagra.

Tabulated studies of cases of these diseases reported during 1918 and 1919 are set forth in tables XXIX to XXXII, inclusive.

A STUDY OF INFLUENZA IN KANSAS FROM OCTOBER, 1918, TO MARCH, 1920.

T. D. TUTTLE, M. D., *Epidemiologist.*

It is generally understood that the outbreak of influenza in 1918 in Kansas appeared during the first week of October. However, quite a number of cases were reported in September, some as early as the first week in September. In addition to this the death records show that dur-

ing the early spring of 1918 there was a marked increase over normal in the number of deaths from pneumonia. This increase in pneumonia deaths was not peculiar to Kansas, but was general throughout the country, and inquiry among physicians reveals the fact that many of the cases of pneumonia in the spring of 1918 presented the same characteristics as were found in the typical influenza cases. In addition to this increased death rate from pneumonia, there are many unofficial and some official reports showing a marked increase in cases of influenza during the spring of 1918 at various points through the country.

Without going into detail relative to the evidence, it is sufficient to state that the outbreak of influenza in 1918 did not come with lightning-like suddenness, but started in a very modest way in the spring of 1918, gained but little headway before the warm weather checked it, and again broke out in the fall, starting with a few cases in September and gradually increasing until in the first week in October sufficient exposure had taken place to result in an apparently explosive outbreak, especially in the cities of the state.

Following the outbreak in October severe recurrences were noted in November and December; also, though to a less marked degree, especially in the rural districts, in January and February of 1919. These recurrences have been frequently designated as "influenza waves," but the rapid reappearance of the disease after a few days or even a few weeks in a community is due to local conditions, and is not the true "influenza wave," which, as demonstrated by Doctor Brownlee, of London (*London Lancet*, November 9, 1919), occurs at intervals of thirty-three and sixty-six weeks. It is interesting to note in support of Doctor Brownlee's findings that the peak of deaths in Chicago in 1920 was reached just sixty-six weeks to a day from the peak of deaths in 1918; also that the epidemic in Kansas during the last of January and the first of February, 1920, occurred just sixty-six weeks from the first explosive outbreak in 1918.

The disease had pretty well subsided in Kansas by the end of December, 1918, but frequent local outbreaks or recurrences kept the total cases up to a fairly high point until the end of March, 1919. However, there was not a single week in 1919, and so far in 1920, when our reports have been free from influenza cases. In September, 1919, there were sharp rises at several points in the state, so much so that we felt we must be facing another true wave of the disease. But this subsided in a very few weeks, and the total report of cases again apparently reached normal and remained so until January, 1920.

On the 11th of January, 1920, the city of Topeka was confronted with a sudden and very extensive outbreak of an enteric ailment designated as "winter cholera." This disease was at first attributed to the water supply, but the author at all times held that it was nothing more nor less than an enteric form of influenza. Careful examination revealed that there was nothing sufficiently wrong with the water supply to account for the outbreak. While the disease presented the symptoms of an acute intestinal disease, the prostration following the attack was too severe and too prolonged to be accounted for by an enteritis of equal

severity and duration. Cases seen by physicians, so far as I have been able to learn, were followed by inflammatory conditions of the respiratory mucous membranes, and two reported frank cases of broncho-pneumonia following "winter cholera." The study of blood and stools from these cases by Doctor Sherwood, of Kansas University, showed the same picture as that found by him in cases of influenza in 1918. The water supply at the Santa Fe shops comes from a source different from that of the city supply. A large number of employees at the shops live out of the city and do not at any time use city water, and yet apparently this "winter cholera" was as common among those not using city water as it was among the users of city water.

Two weeks prior to the outbreak at Topeka there was a similar outbreak among the prisoners at Lansing, about one-third of the inmates of the penitentiary being affected. It is interesting to note that while influenza appeared among the prisoners in February, only twenty cases developed, and these only among the men who had not had "winter cholera." Two months prior to the Topeka outbreak of "winter cholera" a similar outbreak occurred at the State Hospital, just outside of the city limits. The Hospital secures part of its water supply from the city. While this "winter cholera" prevailed in Topeka, the author had reports from numerous sections of the state saying that a similar disease prevailed, thus indicating that it was general throughout the state, and it would be rather remarkable to find all of the water supplies in the state showing pollution at one and the same time. Finally, this outbreak of "winter cholera" did not come with the suddenness generally attributed to it. Practically every physician talked with recalled cases that they had seen weeks previous to January 11. The earliest I was able to hear of was the last week in November, 1919. Thus the disease fits in with the course of influenza, and I have no reason to change my original ideas on the subject.

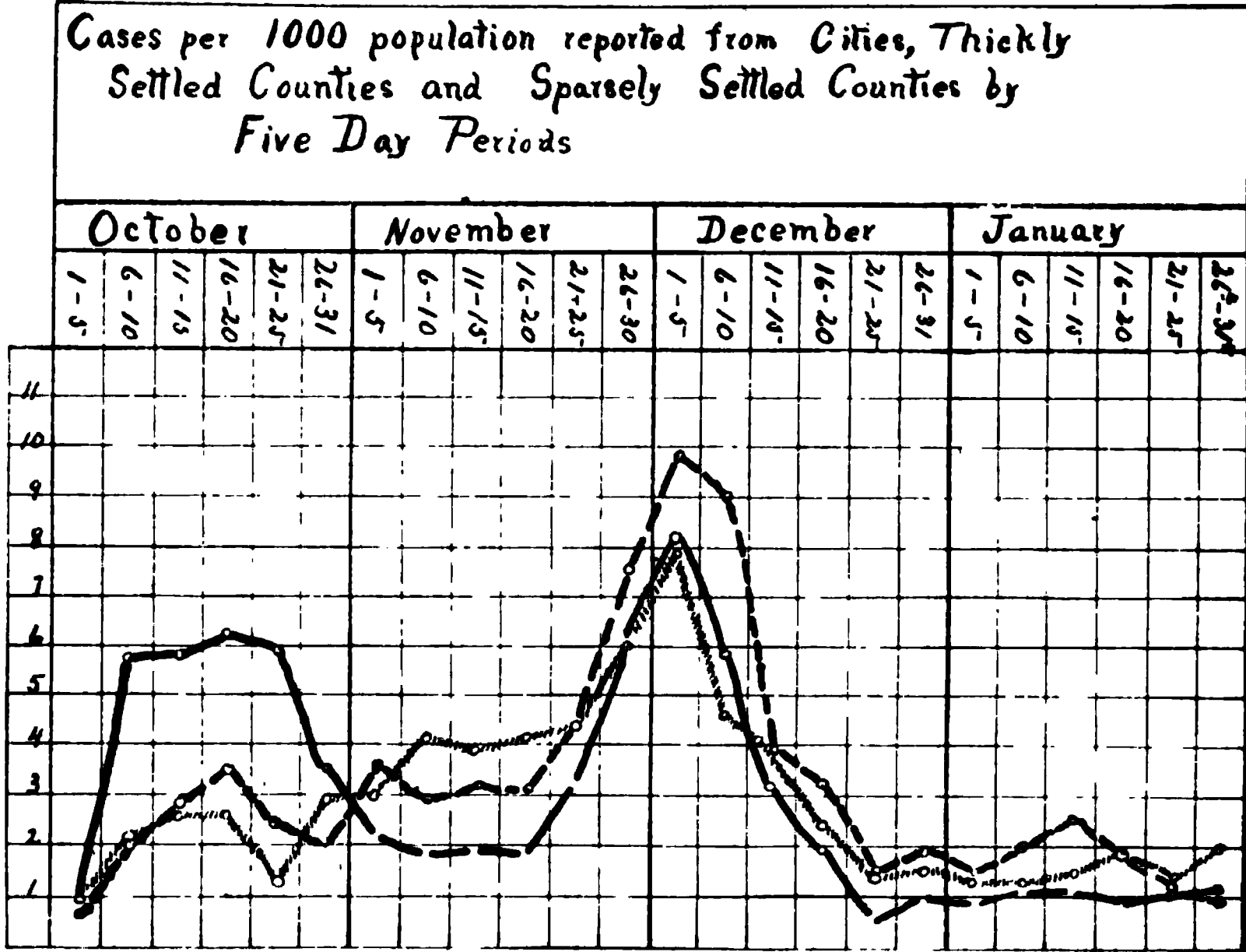
It is interesting to note, as a matter of importance with regard to the period of incubation, that influenza became sufficiently prevalent in the state to justify calls for telegraphic reports from health officers on January 21, just ten days from the date of the general outbreak of "winter cholera" in Topeka.

During the last three months of 1918 and the first three months of 1919 there were reported 174,094 cases of influenza in the state of Kansas. In the study of these cases the state was divided into three areas or divisions. By drawing a line north and south along the western border of Reno county the state is divided into two divisions of practically equal area. West of this line there is a population of 311,009, and this area is designated in this article as "sparsely settled counties"; while east of this line there is a population (exclusive of first-class cities) of 1,106,866, and this area is designated as "thickly settled counties." My third division includes the ten first-class cities, with a total population of 317,763. In presenting the results of my studies I shall frequently refer, for comparison, to "Frost's Reports," such reference indicating a report made by Dr. W. H. Frost, based on the study of a large number of cases, the data being secured by a house-to-house

canvass in several cities in various states in the country, and published in "Public Health Reports" for August 15, 1919.

The first study (chart I) that I have to present, covers a period of only four months, October to January, both inclusive. The cases are arranged in five-day periods. The date of onset of the disease as given in the report is indicated, and not the date the case was reported. The three divisions of the state are indicated as follows: solid line, cities; broken line, thickly settled counties; shaded line, thinly settled counties. In all of my studies cases per 1,000 population are given, thus making the relation between the thickly and thinly settled districts comparable.

Chart I.



In studies dealing with age distribution the cases per 1,000 of that age are given. In short, I have tried at all times to present findings in relation to population, thus enabling the comparison of a county with a population of one thousand with that of a county of 100,000 or more.

Chart I presents some very interesting features. We note the rapid rise of cases in cities (solid line), the peak being reached within the first ten days; then stationary for five days, slight rise the next five days, followed by slight decline; then a sharp decline for ten days to a point of two per 1,000 population, where it remained until the 16th to 20th of November period, after which there is a sharp rise, reaching the apex in the 1st to 5th of December period. Following the lines representing the sparsely settled and thickly settled counties, we note a much less abrupt rise, and also that a high level seems to have been reached in

the 6th to 10th of November period, which level remained stationary until the 16th to 20th of November period, after which both city and country rise uniformly to the 1st to 5th of December period; then all areas decline uniformly, reaching the low point in the 21st to 25th of December period. In January there are slight rises in both rural districts, but none in the cities.

I invite your attention to one feature of chart I that appeals to me as very significant in regard to the period of incubation. This is a point on which we have very little real information. It is generally assumed (I use the word advisedly) that the period of incubation is one or two days. Every physician can recite any number of instances in support of this assumption—instances in which whole families are taken sick within one or two days after the first case appeared in the household. To my mind this is no evidence whatever, for the whole family may have been exposed at the same time several days before, and the disease simply developed in one member a day or two before it developed in the other members. So far as I have been able to learn, there has been little real study regarding the period of incubation in this disease, the short period simply being “taken for granted.” There is much evidence that we have carriers of influenza, so that a family or community may be exposed without knowing it; therefore, the fact that a whole family or community becomes sick within two or three days does not prove that the infection did not occur ten days or two weeks previously. Since we know nothing about the period of incubation in influenza, I wish to invite your attention to the peculiar curve in chart I. In the cities the disease had risen rapidly to a peak, then fallen to a low level, where it remained for several days, strict precautionary measures being enforced; the rural areas had risen gradually to an apparently fixed point, where they were apparently stationary so long as precautionary measures were enforced. On the 11th of November the armistice was signed and for several days thereafter the people joined in one grand celebration, those from the country coming to the cities, and all who were able to be out of bed in the cities joining in great crowds on the streets and in houses, thus furnishing ample opportunity for a general dissemination of the disease. On the basis of a one-to-two-day period of incubation, we should have had a marked rise on the 13th or 14th, but no rise is noted until a period of ten days has elapsed, at which time it is very sharp and involves both city and rural areas to a like degree, indicating a common period of infection.

It is entirely possible that the general celebration had nothing to do with the sharp rise the latter part of November and first of December; if not, the bringing together of great masses of people infected with influenza does not facilitate the spread of the disease. On the other hand, if the celebration did result in the spread of influenza, the period of incubation is nearer ten days than two days. Further, you will observe that the general outbreak of influenza in January, 1920, occurred just ten days after the outbreak of so-called “winter cholera.” Finally, Doctor Sherwood, in his experiments on monkeys, found the period of incubation to be ten days. My guess is that the *period of incubation for influenza is not determined.*

INCOMPLETENESS OF REPORTS.

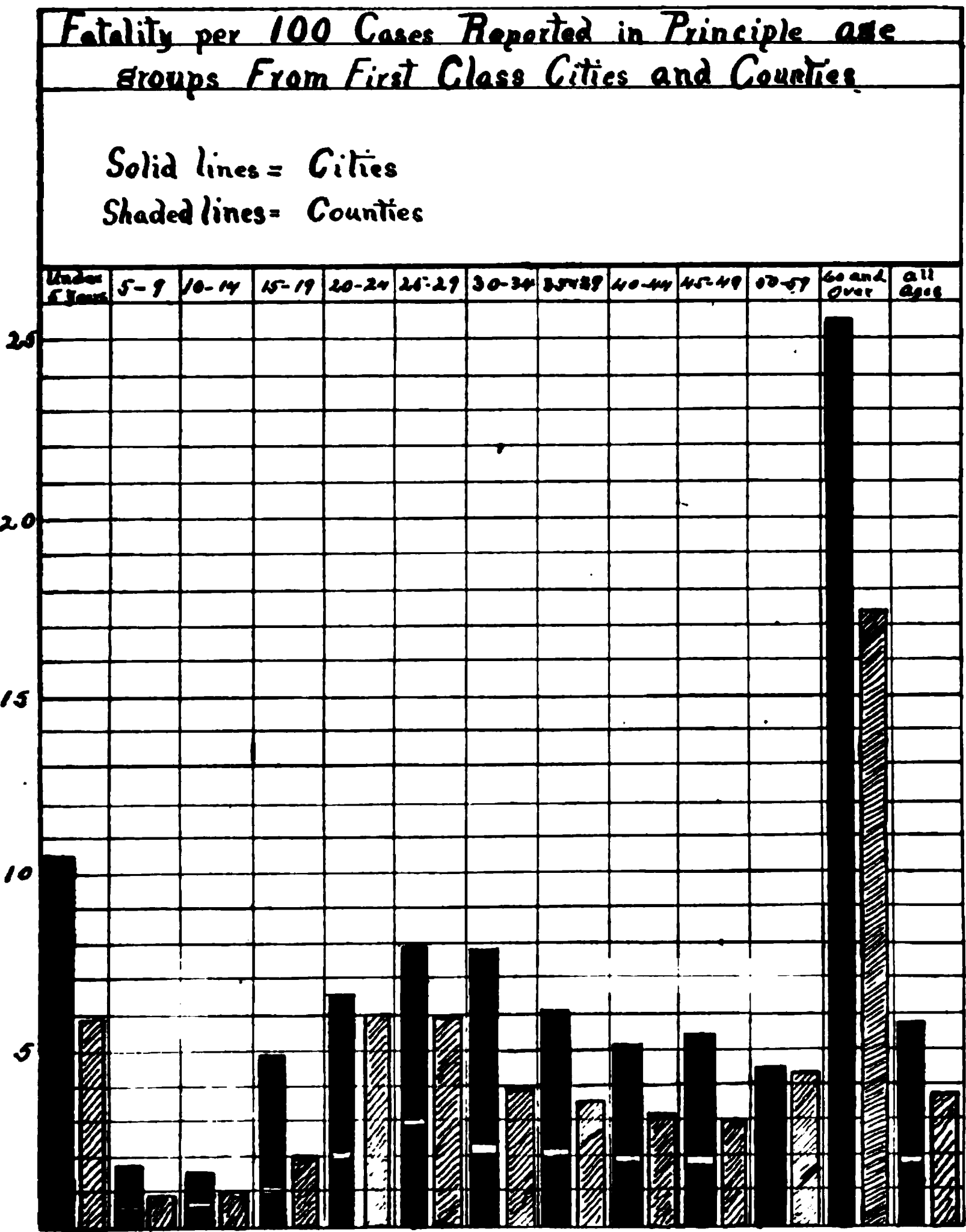
Chart II represents cases reported per 1,000 population in various age groups and in each of the three divisions of the state. It is interesting to note that the total cases reported (last column) per 1,000 population is practically the same in all three divisions. However, the highest point in the rural divisions appears in the ages between 5 and 19, while in the cities the highest point is between the ages of 25 and 39. The total case report per 1,000 population shows 99 for cities, 98 for thickly settled counties and 109 for thinly settled counties. Frost's Reports show a variation in different cities of from 150 to 533 per 1,000, with an average of 280 per 1,000. Based on these findings, only about one-third of our

cases were reported, especially in the cities. From a study of this chart it would seem that the cases were equally well reported in each of the subdivisions of the state. However, under the title "All ages" you will note a break in each of the columns, these breaks indicating the case fatality in each area, and they range as follows: cities, 5.7 per cent; thickly settled counties, 3 per cent; and thinly settled counties, 2.9 per cent. In other words, the case fatality in the cities was about twice as great as in the country. This condition can be explained in one of three ways—first, the disease may have assumed a more malignant form in the cities; second, the cases were more completely reported in the country than in the city; third, the "country doctor" got better results than did the "city doctor."

Chart III shows the case fatality in various age periods. The two rural divisions are combined in this study. The break in the solid columns (cities) indicates the case fatality as presented in the Frost Reports. As Frost's studies were limited to cities, I have used it in this chart only in the city columns. You will note that our case fatality is

always above that found by Frost, while in the final showing—the “All ages” columns—we show a case fatality in the cities of 5.7, while Frost found a case fatality of only 1.8 per cent. On this basis, slightly less than one-third of the cases were reported in our cities. I think that it is fair to assume that the case fatality was at least not any lower in the country than in the city, but the cases reported from the country districts show a case fatality of 3 per cent, thus indicating that practically two-thirds of the cases were reported in the country as against less than one-third in the cities.

Chart III

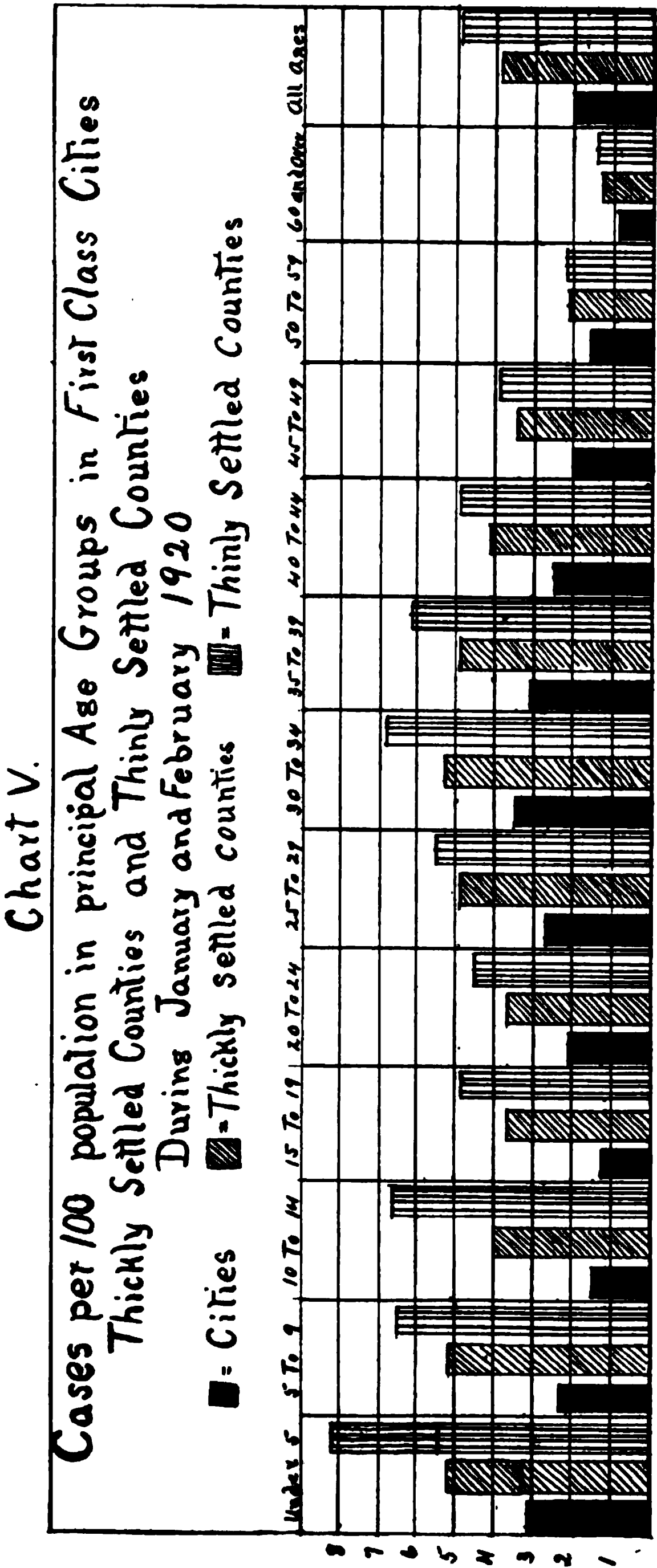


Were the conditions in Kansas the same as those in the cities studied by Frost? This can be answered to some extent by a study of deaths in the state from influenza per 1,000 population. This is presented in chart IV. As Frost's study covered only four months and mine covered six months, we would expect to, and actually do, find a higher mortality in each age group, but the general curve is identical with Frost's, except in the 10-to-14 and 40-to-44 groups, where Frost's rate is slightly higher than ours, while in the 30-to-39 groups ours is considerably higher than Frost's, so that the average will closely approximate.

Chart IV

Again, if a case fatality of 1.8 per cent is too low for Kansas, those localities from which we get comparatively complete reports (and there are a few such localities) should show a higher case fatality. As a matter of fact, 22 counties showed a case fatality, based on actual reports, of less than 2 per cent. Several of these counties include cities of considerable size and are fairly representative of the general conditions in the state.

Does one attack confer immunity? This is probably the most widely debated question of all. Opinions vary from complete immunity to no immunity at all. Some physicians report frequent second attacks and others strongly affirm that there is no such thing as a second attack.



Frost found 121 second attacks reported, but on investigation it was found that only 26 were probably second attacks, and I believe it quite possible that had the investigation been more thorough and complete some of the 26 might have been found to be relapses rather than second attacks.

We would anticipate that a study of cases in the state in 1920 would give us some evidence in this matter. In chart V is a presentation of cases reported in the various age groups per 1,000 population of the age. It is noted that the difference between city and rural cases is much greater than in the 1918-'19 outbreak, the city being much lower in 1920. Is this due to more incomplete reporting in the cities, or to the influence of a larger number of cases in the cities in 1918-'19?

We cannot depend on reports as indicating the number of cases, especially in our cities, but we can estimate the number of cases that should have been reported by using Frost's case fatality and computing cases from death returns in the various age groups. In this study I have used only two divisions of the state, namely, cities of the first class and rural, all that portion outside of cities of the first class being designated as rural. This study is presented in three charts. Chart VI represents the cases per 100 population in various age groups actually reported during the 1918-'19 outbreak (solid lines, cities; broken lines, rural). This chart would seem to indicate that the incidence of the disease was practically the same in the urban and rural districts. However, a study of the death returns indicates that there should have been nearly twice as many cases per 100 population reported in the cities as in the country districts. This is illustrated in chart VIII, showing the number of cases that should have been reported in various age groups, based on a general 2 per cent case fatality.

If one attack of influenza confers immunity against another, and if twice as many of our city people had influenza in the 1918-'19 outbreak as did those of our rural population, we would expect a comparative divergence of these lines in 1920, but with their positions reversed. This we find to actually be the case, as shown by chart VII, based on cases reported during January and February, 1920. However, when we come to study the case fatality we find that our cities in 1920 show a poorer report than in 1918-'19, or else the disease was much more fatal in the cities than in the country, or else the country doctors got better results than the city doctors, for we find the case fatality in the cities in 1920 is 7.2 per cent, while in the country it is 2.3 per cent. We are constantly informed that the epidemic in 1920 was not nearly so malignant as in 1918-'19, yet our cities show a much higher case fatality in 1920 than in 1918-'19. Especially is this true of Wichita and Hutchinson, which show, respectively, a case fatality of 11.6 and 11.9 per cent. Our death returns have not been tabulated sufficiently to enable us to estimate the number of deaths that occurred in each age group; but as a result of the total number of deaths, we find that there should have been reported in the cities 23,328 cases of influenza instead of 6,480, as were actually reported. Our rural districts come practically up to the standard of Frost's case fatality in 1920, being only .5 per cent difference, thus in-

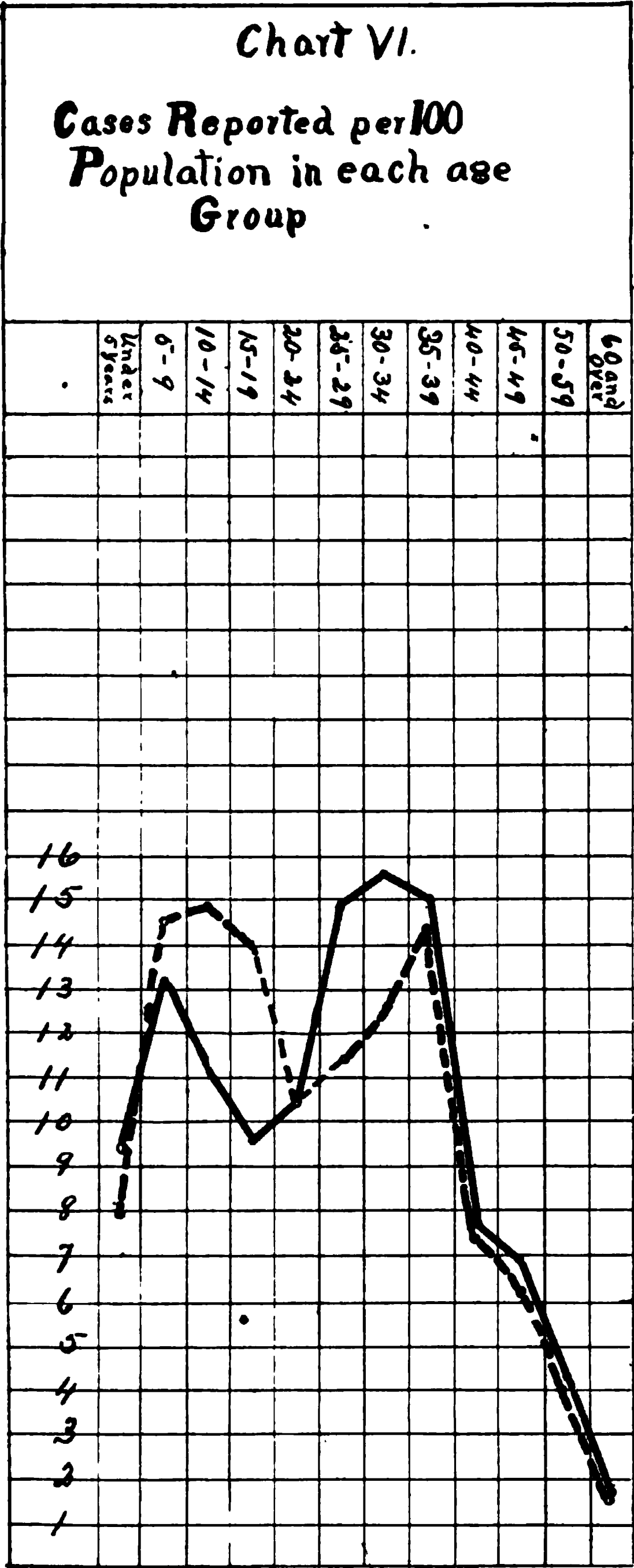
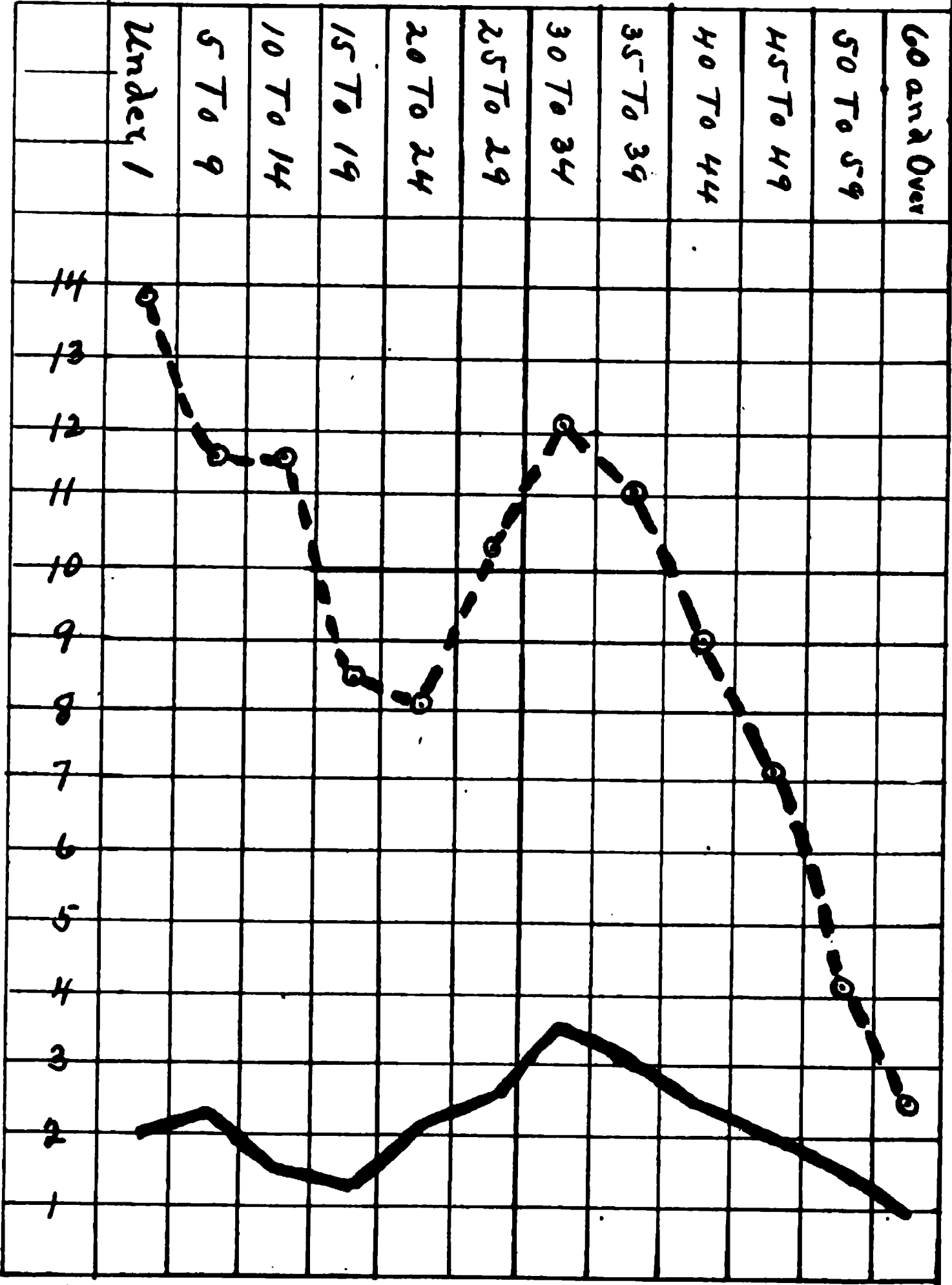


Chart VII.

Cases Per 100 Population
in each age group
in 1920



dicating that the case fatality was much lower in the country districts in 1920 than in 1918, or else our country reports are fairly complete.

Based on a strictly case return basis, it would appear that the larger proportion of cases occurring in the cities in 1918-'19 resulted in a relative decrease in the number of cases in the cities in 1920, but all such appearances are destroyed when we find that the death returns clearly indicate that our city case reports are unreliable.

The 1920 outbreak gives us a little information with regard to the so-called "waves" of 1918-'19. There were no waves in the 1920 outbreak. The disease quickly reached its peak, declined and disappeared. But there was no armistice to celebrate in 1920, to result in a second "wave," and there was no Christmas or other holidays, with resultant crowding of stores, parties, etc., to produce a third "wave." The fact of the matter is that there were no true influenza waves in the 1918-'19 outbreak; they were simply recrudescences due to relaxation of reasonable precautions.

I am frequently reminded that the regulations remained the same, but that the enforcement of the regulations was very lax during the celebration of the armistice; therefore, the fact that the orders remained the same has absolutely no relation to the question.

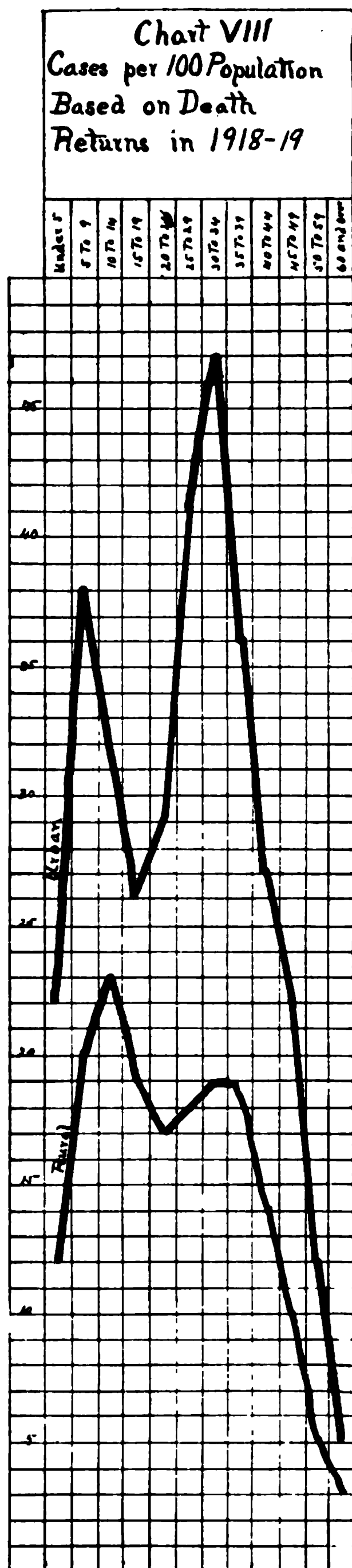
BACTERIOLOGY AND VACCINES.

With regard to the bacteriology of influenza, it is evident to all that we are utterly in the dark. Our laboratories have given us absolutely nothing that is of any benefit whatever either as a remedial or preventative agency. As to vaccines, it is quite evident that none of the several offered has had the least particle of influence in preventing influenza. It is possible that certain vaccines may have some influence in preventing pneumonia, but even here we must frankly accept the Scotch verdict of "not proven."

INFLUENCE OF PREVENTIVE MEASURES

The preventive measures resorted to in different localities varied so greatly that it is impossible to study results in such a way as to reach any accurate conclusions. Such a study would require many months and a large force of investigators, for the effort, to be of any real value, should cover the entire country. Each district must be studied by persons whose sole idea is to secure facts and with no theory to prove. Not only must the methods used and results secured be studied from an unbiased standpoint, but the degree of enforcement of the laws, rules and regulations must be carefully investigated. For instance, it is not sufficient to say, "In this locality quarantine was required, and with these results." The question is, What were the results where quarantine was *enforced*? What were the results where closing orders were *enforced*? etc. That such a study will ever be made is very improbable, for while our government (city, county, state and national) is ever ready to deal with a generous hand for treating the sick, they are conservative in the extreme when it comes to a question of preventing the suffering they are so ready to attempt to alleviate.

For statement of cases of influenza reported, see tables XXV to XXVIII.



Statistical Tables.

(113)

TABLE I.—TYPHOID FEVER, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Rush.....	0	0	3	5	1	1	0	1	1	0	0	1	0	0	13	5
Russell.....	0	0	2	2	2	2	0	0	0	0	0	1	0	0	11	9
Saline.....	0	1	0	2	1	0	1	1	0	1	0	0	0	0	9	10
Scott.....	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	2
Sedgwick, except Wichita.....	0	2	0	5	10	3	4	3	2	0	2	0	0	2	33	11
Seward.....	1	4	15	19	22	9	7	9	4	5	3	4	2	0	104	104
Shawnee, except Topeka.....	0	1	3	0	4	1	0	0	0	0	0	0	0	0	9	7
Sheridan.....	0	0	0	0	3	0	1	0	0	0	0	0	0	0	4	7
Sherman.....	0	0	4	10	6	10	7	2	2	2	3	1	1	2	54	54
Smith.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Stafford.....	0	0	1	0	1	1	1	0	0	0	0	0	0	0	2	1
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1
Stevens.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Sturgis.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Sumner.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas.....	0	0	5	4	11	6	2	0	3	0	0	1	1	2	35	35
Trego.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Wabaunsee.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wallace.....	0	0	1	4	1	0	0	2	0	0	0	1	0	0	10	1
Washington.....	0	0	0	1	0	0	0	0	1	0	0	0	0	1	2	7
Wichita.....	0	1	6	3	3	3	2	1	0	0	0	1	0	2	22	12
Wilson.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Woodson.....	0	4	15	17	6	4	7	6	5	2	0	2	1	0	70	35
Wyandotte, except Kansas City.....	0	0	3	3	2	2	0	0	1	0	1	2	0	1	16	13
Wyandotte, except Kansas City.....	0	0	1	2	1	1	1	1	1	1	0	1	1	0	11	11
Kansas City.....	0	3	22	10	9	8	11	6	6	3	2	3	1	3	87	54
Totals.....	1	65	279	329	309	200	160	127	79	62	40	53	35	53	1,792	1,792

TYPHOID FEVER—Continued.

TABLE II.—Cases reported from counties and first-class cities during 1919, arranged by agea.

[illegible]

TABLE III.—TYPHOID FEVER, 1918—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Cases per 1000 popu- lation.
Riley	2	0	2	0	0	1	0	2	1	1	0	0	9	0.8
Rooks	0	0	0	0	0	0	1	0	0	0	0	0	1	0.1
Rush	0	0	0	2	8	7	1	0	0	0	0	0	13	1.5
Russell	0	0	0	1	0	1	4	1	4	0	0	0	11	1.0
Saline	0	0	2	0	2	1	0	1	1	0	2	0	9	0.4
Scott	0	0	0	0	1	0	0	0	0	1	0	0	2	0.6
Sedgwick, except Wichita	0	0	0	1	0	2	11	9	7	3	0	0	33	1.6
Seward	0	1	0	2	2	10	19	24	30	13	2	1	104	1.6
Shawnee, except Topeka	0	0	0	0	0	0	2	3	2	2	0	0	9	1.5
Sheridan	1	0	0	0	0	0	17	22	6	1	3	0	54	0.2
Sherman	0	1	0	0	1	0	0	0	0	0	0	0	1	1.8
Smith	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4
Stafford	1	0	0	0	0	0	1	0	0	0	0	0	4	0.4
Stanton	0	0	0	0	0	0	0	0	1	1	0	0	4	0.2
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sumner	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Thomas	2	0	1	0	2	1	5	2	19	3	0	0	36	1.3
Trego	0	0	0	0	0	0	0	0	0	0	1	0	1	0.2
Wabaunsee	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wallace	1	0	0	0	0	0	0	2	6	0	0	2	12	1.0
Washington	0	0	1	0	0	0	1	0	0	1	0	0	2	0.9
Wichita	0	0	0	4	0	0	5	2	7	4	0	0	22	1.2
Wilson	0	0	0	0	0	0	0	0	0	1	0	0	1	0.5
Woodson	4	0	13	2	1	0	16	14	6	11	3	0	70	3.4
Wyandotte, except Kansas City	0	0	2	0	0	2	0	5	7	0	0	0	16	1.7
	3	3	6	2	4	10	11	27	15	4	2	2	87	0.6
Totals	63	32	49	50	49	101	254	397	432	165	81	19	1,792	1.0

TYPHOID FEVER—Continued.

TABLE IV.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	0	0	0	0	0	2	6	4	1	0	0	13
Anderson.....	0	0	0	1	0	0	0	1	2	0	0	0	4
Atchison, except Atchison city.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Barber.....	0	0	1	0	1	3	1	0	1	0	0	0	6
Barton.....	0	0	0	0	0	0	1	3	0	2	0	0	16
Bourbon, except Fort Scott.....	0	0	0	0	0	0	1	1	0	1	0	0	3
Brown.....	0	0	0	0	0	0	1	0	0	1	0	0	4
Butler.....	1	0	0	0	0	0	1	2	2	0	0	0	6
Chase.....	0	1	4	3	0	1	5	8	15	16	11	11	78
Chautauqua.....	0	0	0	0	0	0	2	2	4	0	0	0	8
Cherokee.....	0	0	0	0	0	0	0	0	0	1	0	0	1
Cheyenne.....	0	0	0	1	0	0	9	8	13	13	5	8	57
Clark.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay.....	0	1	0	0	0	0	0	0	0	0	0	0	1
Cloud.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey.....	0	0	1	0	0	2	1	1	0	1	0	0	5
Comanche.....	0	0	1	0	0	0	2	2	0	0	0	0	5
Cowley.....	0	0	0	0	0	0	7	1	3	0	0	0	11
Crawford, except Pittsburg.....	0	0	0	0	0	0	0	3	3	2	1	0	9
Decatur.....	2	0	0	0	2	1	4	0	1	2	1	2	20
Dickinson.....	0	0	0	0	0	1	1	0	4	0	0	0	11
Doniphan.....	0	0	0	0	0	0	0	1	0	0	0	0	1
Douglas.....	0	0	0	0	0	0	0	0	1	1	0	2	5
Edwards.....	0	0	0	4	1	1	0	4	1	0	0	1	20
Elk.....	0	0	0	0	0	1	0	1	3	2	0	0	6
Ellis.....	1	4	0	0	1	1	3	1	0	0	0	0	12
Ellsworth.....	0	0	0	0	0	0	1	1	2	0	0	0	2
Finney.....	0	0	0	0	0	0	0	0	3	0	1	0	6
Ford.....	0	0	0	0	0	0	0	2	4	0	0	0	7
Franklin.....	0	0	0	0	0	0	1	1	1	1	0	0	7
Geary.....	0	0	0	0	0	0	0	0	1	2	0	0	3
Gove.....	0	0	0	0	0	0	0	0	1	0	0	0	0
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	0	1	1	1	1	0	0	0
Greenwood.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton.....	0	0	0	0	0	3	2	4	1	0	0	0	14

TABLE IV.—TYPHOID FEVER, 1919—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Harper.....	0	0	0	0	0	0	0	0	1	0	0	0	1
Harvey.....	0	0	0	0	0	1	2	0	0	1	0	0	4
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	0	0	0	0	1	0	0	1	0	0	0	3
Jackson.....	0	0	0	0	0	0	0	0	0	0	1	0	2
Jefferson.....	0	0	0	0	0	0	0	0	0	0	0	0	1
Jewell.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Johnson.....	0	0	0	0	0	0	2	0	0	0	0	0	2
Kearny.....	0	0	1	0	0	0	0	0	0	0	1	0	2
Kingman.....	0	0	0	0	0	0	3	7	1	0	0	0	13
Kiowa.....	0	0	0	0	0	0	0	2	3	0	0	0	5
Labette, except Parsons.....	0	0	0	0	0	0	0	5	1	0	0	0	11
Lane.....	0	0	0	0	0	1	0	3	2	0	0	0	8
Leavenworth, except Leavenworth city.....	2	0	0	1	0	0	0	0	0	0	0	0	3
Lincoln.....	0	0	0	0	0	0	2	0	1	0	0	0	3
Linn.....	0	1	0	0	0	0	0	1	0	1	0	0	3
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon.....	0	0	0	0	0	0	4	0	0	0	0	0	4
Marion.....	0	0	0	0	0	0	1	0	3	1	0	0	5
Marshall.....	0	0	0	0	0	0	0	0	0	1	0	0	1
McPherson.....	0	0	0	0	0	0	2	0	0	1	0	0	3
Meade.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami.....	0	0	0	0	0	0	0	0	0	1	0	0	1
Mitchell.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville.....	0	0	0	0	0	0	0	0	3	0	0	0	3
Morris.....	1	0	0	0	2	0	14	3	6	0	0	0	28
Morton.....	0	0	0	0	1	0	0	5	1	0	0	0	6
Nemaha.....	0	0	0	0	0	1	0	0	0	0	0	0	1
Neosho.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Neosho New.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Osborne.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Pottawatomie.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Pratt.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Rawlins.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hutchinson.....	0	0	0	0	0	0	1	2	0	0	0	0	3
	0	0	1	0	2	0	14	0	4	1	0	0	24

Gray.....	13	2	13.0	12	0	0	0.0	18	4	22.2	21	3	9.5	2	0	50.0	3	0	0.0
Greeley.....	1	1	100.0	0	0	0	0.0	2	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Greenwood.....	33	3	9.0	25	0	8.0	0.0	33	5	15.1	42	6	14.3	25	1	16.0	14	4	28.8
Hamilton.....	0	1	.....	1	1	100.0	0.0	4	1	25.0	1	1	100.0	1	0	0.0	0	0	0.0
Harper.....	14	5	7.1	10	0	20.0	0.0	13	1	7.7	26	4	15.4	15	1	6.7	1	0	0.0
Harvey.....	32	0	15.6	17	0	5.9	0.0	18	5	27.8	20	4	20.0	7	1	14.2	4	1	25.0
Haskell.....	0	0	0.0	1	0	0.0	0.0	3	0	0.0	3	0	0.0	0	0	0.0	0	0	0.0
Hodgeman.....	6	0	0.0	2	0	0.0	0.0	8	1	12.5	1	0	0.0	2	0	0.0	3	1	33.3
Jackson.....	18	0	0.0	3	0	0.0	0.0	13	3	23.0	4	2	50.0	3	0	33.3	2	1	100.0
Jefferson.....	16	4	11.1	0	1	33.3	0.0	24	4	16.7	4	3	50.0	10	1	10.0	1	0	0.0
Jewell.....	3	4	25.0	33	0	0.0	12.2	15	6	40.0	9	2	22.2	11	1	9.9	2	1	50.0
Johnson.....	3	4	.....	11	4	36.6	0.0	19	2	10.5	22	4	18.2	7	2	28.5	6	5	83.3
Kearny.....	8	3	37.5	6	1	16.6	0.0	10	3	30.0	12	0	0.0	7	0	0.0	1	0	0.0
Kingman.....	6	0	0.0	17	1	5.9	0.0	6	0	0.0	12	2	16.6	13	2	15.4	13	1	30.8
Kiowa.....	4	0	0.0	2	2	100.0	0.0	12	1	8.3	2	0	0.0	10	1	10.0	5	1	20.0
Labette, except Parsons.....	25	1	4.0	23	3	13.0	11.1	27	3	11.1	27	6	22.2	13	7	50.4	11	5	45.4
Lane.....	23	0	0.0	10	1	10.0	23.5	17	4	23.5	15	1	6.6	10	3	30.0	8	0	0.0
Leavenworth, except Leavenworth city.....	0	0	0.0	7	0	0.0	0.0	1	0	0.0	0	0	0.0	1	0	0.0	0	0	0.0
Lincoln.....	17	4	23.5	7	2	28.6	8.3	12	1	8.3	60	3	5.0	16	2	12.5	6	0	0.0
Linn.....	24	2	8.3	14	2	14.3	11.1	9	1	11.1	208	22	10.6	15	0	0.0	6	1	16.6
Lincoln.....	10	0	0.0	10	0	0.0	10.0	6	1	10.0	6	3	50.0	6	0	0.0	1	0	0.0
Linn.....	6	4	66.6	11	3	27.3	7.1	16	1	7.1	16	6	37.5	14	1	7.1	8	1	12.5
Logan.....	1	1	100.0	1	0	0.0	60.0	0	3	60.0	0	0	0.0	1	0	0.0	0	0	0.0
Lyon.....	26	1	3.8	16	1	6.2	10.7	28	3	10.7	0	4	14.3	30	5	16.6	17	1	5.9
Marion.....	8	0	0.0	19	3	15.8	0.0	18	0	0.0	16	3	18.7	15	1	6.7	8	0	0.0
Marshall.....	22	3	13.6	10	1	10.0	12.5	8	1	12.5	17	0	0.0	9	3	33.3	8	1	12.5
McPherson.....	17	0	0.0	4	1	25.0	16.6	6	1	16.6	12	2	6.6	6	1	16.6	3	1	33.3
Meade.....	9	1	11.1	2	0	0.0	18.1	11	2	18.1	2	2	100.0	7	0	0.0	3	0	0.0
Miami.....	8	2	25.0	63	4	6.3	6.8	74	5	6.8	24	6	12.5	13	2	15.4	19	3	15.8
Mitchell.....	4	0	0.0	6	2	33.3	0.0	10	0	0.0	5	0	0.0	3	2	66.6	1	0	0.0
Montgomery, except Coffeyville.....	42	15	35.4	51	13	25.0	14.9	67	10	14.9	69	12	17.4	69	16	23.3	38	2	5.3
Morris.....	21	0	0.0	9	1	11.1	11.3	53	6	11.3	64	7	10.9	45	5	11.1	28	4	14.3
Morton.....	3	1	33.3	4	0	0.0	28.5	16	4	28.5	16	2	12.5	10	1	10.0	4	1	25.0
Nemaha.....	1	3	.....	1	0	0.0	0.0	12	0	0.0	9	1	11.1	9	2	23.2	6	0	0.0
Nemaha.....	7	2	28.6	8	2	12.5	9.9	11	1	9.9	2	0	0.0	8	2	25.0	4	2	50.0
Nemaha.....	35	9	25.7	20	0	0.0	21.9	43	7	21.9	43	7	16.3	28	2	6.9	12	3	25.0
Ness.....	2	0	0.0	4	0	0.0	0.0	6	0	0.0	12	2	6.6	2	0	0.0	0	0	0.0
Norton.....	13	0	0.0	11	0	0.0	0.0	11	0	0.0	8	2	25.0	6	1	16.6	4	0	0.0
Osage.....	9	1	11.1	7	1	14.3	6.7	15	1	6.7	14	0	0.0	11	2	18.0	3	1	33.3
Osborne.....	3	2	66.6	4	0	0.0	0.0	3	0	0.0	5	4	80.0	9	0	0.0	2	0	0.0
Ottawa.....	17	1	5.9	10	0	0.0	0.0	6	0	0.0	3	0	0.0	11	1	9.9	2	0	0.0
Pawnee.....	31	6	19.3	37	3	8.1	13.2	30	4	13.2	12	3	25.0	22	1	4.5	3	0	0.0
Phillips.....	1	1	100.0	5	0	0.0	0.0	2	0	0.0	2	1	50.0	7	1	14.3	2	0	0.0
Pottawatomie.....	1	0	0.0	0	0	0.0	0.0	1	0	0.0	1	0	0.0	0	1	.....	0	0	0.0
Pratt.....	10	3	30.0	11	1	9.1	0.0	9	0	0.0	5	2	40.0	27	4	14.4	6	2	33.3
Rawlins.....	5	2	40.0	2	0	0.0	0.0	2	0	0.0	2	1	50.0	0	0	0.0	1	0	0.0
Reno, except Hutchinson.....	3	2	66.6	19	2	10.5	21.4	14	3	21.4	15	2	13.3	8	2	25.0	2	0	0.0
Republic.....	61	7	13.7	24	4	16.6	16.6	42	7	16.6	33	1	3.3	18	5	17.8	24	4	16.6
Rice.....	20	4	20.0	10	1	25.0	20.0	5	1	20.0	16	3	18.7	9	0	0.0	0	0	0.0
							9.5				8	0	0.0	16	1	6.3	6	1	16.6

TABLE V.—TYPHOID FEVER, 1914 TO 1919—CONCLUDED.

COUNTIES AND CITIES.	1914.			1915.			1916.			1917.			1918.			1919.		
	Cases.	Deaths.	Case fatality.	Cases.	Deaths.	Case fatality.	Cases.	Deaths.	Case fatality.	Cases.	Deaths.	Case fatality.	Cases.	Deaths.	Case fatality.	Cases.	Deaths.	Case fatality.
Riley.....	26	1	3.8	11	0	0.0	14	0	0.0	41	1	2.4	9	0	0.0	3	0	0.0
Rooks.....	4	1	25.0	1	1	100.0	3	0	0.0	5	3	60.0	1	1	100.0	1	1	100.0
Rush.....	5	3	60.0	0	0	0.0	8	2	25.0	1	1	100.0	13	3	12.3	0	0	0.0
Russell.....	0	0	0.0	2	1	50.0	9	1	11.1	11	1	9.1	11	2	18.1	6	2	33.3
Saline.....	7	3	42.9	10	2	20.0	17	3	17.6	25	3	12.0	9	6	66.7	3	3	100.0
Scott.....	2	0	0.0	0	1	.....	2	1	50.0	0	0	0.0	2	1	50.0	2	1	50.0
Sedgwick, except Wichita.....	11	2	18.1	9	0	0.0	9	1	11.1	29	3	10.3	33	0	0.0	8	1	12.5
Wichita.....	64	17	26.5	73	9	12.3	120	13	10.8	138	19	13.8	104	21	19.3	51	8	15.6
Seward.....	5	0	0.0	7	0	0.0	22	3	13.6	15	1	6.7	9	1	9.9	1	1	100.0
Shawnee, except.....	10	2	20.0	4	2	50.0	51	2	3.9	7	0	0.0	4	2	50.0	5	2	40.0
Topoka.....	21	5	23.8	46	14	30.4	92	9	9.7	66	12	18.1	54	8	14.8	25	4	16.0
Sheridan.....	0	0	0.0	2	0	0.0	0	0	0.0	3	1	33.3	1	0	0.0	1	0	0.0
Sherman.....	0	0	0.0	1	0	0.0	1	0	0.0	3	0	0.0	2	0	0.0	0	0	0.0
Smith.....	4	3	75.0	6	0	0.0	6	0	0.0	8	0	0.0	4	2	50.0	1	0	0.0
Stafford.....	3	4	.....	6	1	16.6	14	4	28.5	4	1	25.0	0	1	.....	5	0	0.0
Stanton.....	0	0	0.0	0	0	0.0	3	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Stevens.....	3	2	66.6	0	0	0.0	1	0	0.0	6	0	0.0	0	0	0.0	1	0	0.0
Sumner.....	79	4	5.0	31	3	9.6	59	6	10.2	32	3	9.4	35	5	14.2	14	2	14.3
Thomas.....	12	1	8.3	2	0	0.0	5	2	40.0	0	0	0.0	1	0	0.0	2	1	50.0
Trego.....	1	1	100.0	0	0	0.0	3	0	0.0	1	0	0.0	0	1	.....	0	0	0.0
Wabaunsee.....	5	0	0.0	7	1	14.3	10	0	0.0	6	0	0.0	12	1	8.5	3	0	0.0
Wallace.....	1	0	0.0	1	0	0.0	2	1	50.0	0	0	0.0	2	0	0.0	0	0	0.0
Washington.....	15	2	13.3	6	1	16.6	7	1	14.3	12	0	0.0	22	2	9.1	2	0	0.0
Wichita.....	0	0	0.0	0	0	0.0	0	0	0.0	1	0	0.0	1	0	0.0	0	0	0.0
Wilson.....	52	7	13.5	26	2	7.7	18	0	0.0	35	7	20.0	70	9	12.9	16	1	6.3
Woodson.....	13	3	23.0	6	1	16.6	14	2	14.3	11	0	0.0	16	2	12.5	5	0	0.0
Wyandotte, except Kansas City.....	3	4	.....	2	2	100.0	15	4	26.6	16	2	12.5	11	3	27.3	0	1	.....
Kansas City.....	57	23	38.6	44	15	34.1	42	14	33.3	54	15	27.8	87	23	25.5	43	9	20.9
Totals.....	1,684	338	20.0	1,208	196	15.1	2,101	263	12.5	2,534	332	13.1	1,792	289	16.1	836	135	16.3

SMALLPOX.

TABLE VI.—Cases reported from counties and first-class cities, during 1918, arranged by ages.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Allen.....	1	11	34	32	24	9	3	7	19	10	6	4	4	24	188	15
Anderson.....	0	2	0	3	6	6	2	4	1	3	2	2	2	1	34	1
Atchison, except Atchison city.....	0	1	4	4	3	4	3	3	3	3	3	1	0	1	33	10
Barber.....	0	0	0	1	0	0	0	0	1	2	1	0	0	1	31	18
Barton.....	0	3	4	4	0	8	5	4	1	4	0	0	0	3	8	3
Bourbon, except Fort Scott.....	0	3	6	12	10	6	5	3	8	6	4	4	2	1	48	29
Brown.....	0	11	15	12	8	4	12	7	2	6	4	8	3	1	65	3
Butler.....	1	8	7	9	11	12	6	10	4	7	4	8	4	3	94	3
Chase.....	5	13	15	16	22	49	41	23	20	21	9	8	3	1	297	17
Chautauqua.....	0	1	0	0	1	0	0	3	1	1	0	0	1	0	293	34
Cherokee.....	0	1	2	2	6	3	2	1	1	1	0	0	0	9	8	12
Cheyenne.....	2	18	39	54	43	33	23	24	20	17	14	21	11	48	367	2
Clark.....	0	0	0	1	2	2	1	0	0	5	4	1	1	0	16	71
Clay.....	0	0	2	0	0	2	3	1	1	1	1	0	1	0	39	0
Cloud.....	1	4	5	2	11	9	3	1	1	3	1	1	3	1	45	14
Coffey.....	0	1	0	2	6	4	6	0	2	2	2	4	2	1	32	10
Comanche.....	1	5	9	7	6	2	2	1	1	2	1	1	1	1	40	6
Cowley.....	4	9	15	11	27	15	16	17	15	8	5	11	6	5	163	1
Crawford, except Pittsburg.....	2	18	54	35	35	20	19	15	25	16	10	12	5	18	284	12
Decatur.....	1	3	15	13	15	6	11	4	5	1	5	1	0	17	97	69
Dickinson.....	2	3	2	6	10	8	3	2	2	2	0	0	0	1	43	16
Doniphan.....	0	2	5	3	7	4	7	6	2	0	1	6	1	1	42	8
Douglas.....	0	5	5	5	10	7	6	3	6	2	3	3	5	0	53	14
Edwards.....	2	4	4	2	7	3	4	5	1	5	0	0	0	3	54	52
Elk.....	0	2	1	5	2	7	4	3	4	2	0	0	2	1	30	11
Ellis.....	1	1	5	2	2	2	1	2	3	1	2	0	0	2	0	0
Ellsworth.....	1	3	3	0	3	2	1	1	2	1	0	0	2	5	4	4
Finney.....	0	1	5	0	1	3	4	0	1	0	0	0	1	0	22	14
Ford.....	0	0	0	0	2	0	1	2	0	0	0	0	0	0	19	0
Franklin.....	0	1	12	7	11	10	7	3	2	1	1	4	1	1	6	2
Geary.....	0	3	4	0	6	4	3	2	6	3	2	1	1	1	80	9
Gove.....	0	0	1	0	1	0	0	0	3	0	0	1	1	1	30	3
Graham.....	0	3	1	1	1	0	0	0	1	0	0	2	0	0	9	9
Grant.....	4	19	27	19	16	10	8	7	11	14	3	3	1	18	160	0
Gray.....	0	0	0	0	1	1	0	0	0	0	0	0	0	0	8	0
Greeley.....	1	3	1	3	1	2	3	1	1	1	0	1	0	0	18	6
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE VI.—SMALLPOX, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Greenwood.....	0	2	1	3	3	3	3	1	2	1	2	1	3	4	29	5
Hamilton.....	0	0	0	1	0	0	0	1	0	0	0	1	0	0	4	0
Harper.....	0	4	4	0	0	2	2	3	1	2	0	1	1	0	20	7
Harvey.....	0	1	3	8	6	5	5	4	2	1	0	0	0	1	38	9
Haskell.....	2	4	7	2	0	0	0	2	0	0	0	0	0	0	17	0
Hodgeman.....	0	4	0	2	0	0	0	2	3	1	1	0	0	0	37	0
Jackson.....	0	4	2	4	9	4	3	2	6	4	2	1	2	1	39	1
Jefferson.....	0	0	4	6	4	7	2	1	2	4	3	2	1	0	56	32
Jewell.....	1	6	8	9	8	5	2	5	4	8	1	4	2	5	48	6
Johnson.....	1	3	6	6	3	3	2	5	0	1	0	0	0	0	7	4
Kearny.....	0	2	2	1	1	0	0	1	0	1	0	0	0	0	30	1
Kingman.....	1	4	4	3	2	7	1	0	1	2	0	3	0	0	22	10
Kiowa.....	1	2	2	7	5	2	1	1	5	1	1	2	1	0	55	9
Labette, except Parsons.....	1	0	3	4	3	2	6	10	10	11	3	1	0	15	65	15
Lane.....	0	2	3	4	5	0	0	0	1	0	0	0	0	2	4	13
Leavenworth, except Leavenworth city.....	0	4	7	8	11	4	1	2	1	2	2	5	3	0	50	2
Lincoln.....	0	5	7	6	7	6	5	0	1	1	7	5	2	0	65	2
Linn.....	0	0	0	2	1	1	1	0	1	0	1	1	1	0	9	9
Logan.....	1	4	6	14	14	1	1	0	1	1	5	1	5	1	75	15
Lyon.....	0	4	0	3	1	7	3	4	0	3	0	1	0	0	8	4
Marion.....	0	2	2	5	18	17	12	8	0	6	4	2	0	7	94	8
Marshall.....	2	6	14	24	17	14	7	6	6	4	0	6	1	13	114	42
McPherson.....	4	4	15	16	8	3	1	5	6	7	0	6	2	0	76	18
Meade.....	2	1	1	3	1	2	1	1	2	0	5	1	0	1	16	1
Miami.....	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0
Mitchell.....	1	2	11	7	15	19	6	13	11	5	4	1	1	6	101	9
Montgomery, except Coffeyville.....	1	4	13	15	21	25	9	12	6	3	5	10	4	4	43	2
Morris.....	1	8	16	24	16	19	17	15	20	18	4	4	3	8	146	42
Morton.....	0	1	3	2	1	5	1	0	0	3	0	2	0	0	18	17
Nemaha.....	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	9
Neosho.....	0	1	0	0	3	5	1	1	0	1	3	1	2	6	24	2
Neosho.....	2	7	6	8	4	9	10	7	5	0	2	0	0	14	72	14
Ness.....	0	3	4	3	4	3	1	1	0	1	2	2	0	0	25	0
Norton.....	0	1	1	2	0	1	1	0	2	3	0	2	2	1	14	18
Osage.....	1	6	13	8	8	12	4	3	3	1	2	2	3	3	71	20
Osborne.....	0	5	16	11	6	6	2	5	2	3	3	3	3	4	69	25
Ottawa.....	0	0	18	7	5	3	4	3	2	4	3	2	1	20	69	1
Pawnee.....	0	2	7	7	15	10	7	9	2	8	3	3	1	0	78	10
Phillips.....	1	0	0	3	2	1	4	2	1	1	0	2	1	10	23	13

SMALLPOX—Continued.

TABLE VII.—Cases reported from counties and first-class cities during 1919, arranged by ages.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Allen.....	0	0	0	0	0	0	0	0	1	1	0	0	0	3	5	15
Anderson.....	0	1	1	0	9	1	4	2	1	0	0	0	0	0	19	1
Atchison, except.....	0	0	1	4	4	2	1	0	1	0	0	0	0	8	21	10
Atchison city.....	0	7	27	28	27	15	6	5	6	7	4	3	4	71	210	18
Barber.....	1	2	2	1	1	2	2	0	0	3	1	0	1	1	17	3
Barton.....	0	2	10	11	5	1	4	1	2	1	0	1	1	0	39	29
Bourbon, except.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Fort Scott.....	0	0	1	0	0	0	0	1	0	0	0	1	0	0	3	3
Brown.....	0	4	2	5	6	7	1	1	0	0	0	1	2	4	43	17
Butler.....	0	5	8	18	17	14	6	10	8	6	2	2	0	14	110	34
Chase.....	0	0	0	1	1	0	0	0	0	1	0	0	0	2	5	12
Chautauqua.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Cherokee.....	0	0	0	0	6	1	1	0	0	2	1	0	1	1	13	71
Cheyenne.....	0	1	2	2	0	1	2	0	1	0	0	0	0	0	11	2
Clark.....	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
Clay.....	0	2	3	1	3	0	1	2	2	0	0	0	0	0	14	14
Cloud.....	1	3	5	5	9	4	2	1	1	5	2	2	0	0	40	10
Coffey.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	6
Comanche.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cowley.....	0	0	2	1	1	1	0	0	3	0	0	2	0	0	14	12
Crawford, except.....	0	4	6	11	8	6	3	4	2	8	1	1	0	1	57	69
Pittsburg.....	0	0	4	2	1	0	0	2	0	1	3	0	0	6	16	16
Decatur.....	0	1	0	1	1	0	1	0	0	1	0	0	0	0	3	3
Dickinson.....	0	1	0	0	0	0	2	0	0	0	1	0	0	0	6	14
Doniphan.....	0	3	7	6	2	2	2	0	2	0	1	1	0	0	29	52
Douglas.....	0	3	1	2	4	4	2	1	1	1	0	0	0	0	18	11
Edwards.....	0	2	1	0	0	0	0	1	0	0	0	0	0	1	6	0
Elk.....	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	4
Ellis.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	14
Ellsworth.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Finney.....	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Ford.....	0	0	0	0	2	1	0	0	0	0	0	0	1	0	3	2
Franklin.....	0	1	0	0	0	0	0	0	1	0	0	0	0	0	11	9
Geary.....	0	2	1	0	0	0	0	1	0	0	0	0	0	0	5	3
Gove.....	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	9
Graham.....	0	3	0	1	0	1	0	1	0	0	0	0	0	0	10	0
Grant.....	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Gray.....	0	4	0	3	5	2	1	0	0	0	1	0	0	2	26	6
Greeley.....	0	0	0	0	0	0	0	3	0	1	0	0	0	1	0	0

TABLE VII.—SMALLPOX, 1919—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Rush.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
Russell.....	0	0	0	0	0	0	1	0	1	1	0	0	0	0	3	7
Saline.....	0	1	2	0	1	2	1	0	0	2	1	0	0	1	11	6
Scott.....	0	1	0	2	0	0	0	0	1	1	1	0	0	0	6	3
Sedgwick, except Wichita.....	0	0	2	1	0	1	0	1	1	0	0	0	2	0	8	36
Wichita.....	1	24	57	44	16	17	16	20	20	13	7	14	2	0	251	102
Seward.....	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
Shawnee, except Topeka.....	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	6
Sheridan.....	0	1	4	2	5	5	1	2	6	2	2	2	2	2	36	38
Sherman.....	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	3
Smith.....	0	1	3	3	5	0	0	0	1	3	0	0	0	0	16	0
Stafford.....	0	3	12	14	22	3	2	4	5	9	4	6	2	0	86	18
Stanton.....	0	0	0	0	0	0	1	1	0	0	2	0	1	0	5	8
Stevens.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner.....	0	0	1	1	1	1	2	0	1	0	0	0	1	0	6	6
Thomas.....	0	4	4	5	5	6	2	0	2	1	2	1	1	0	33	50
Trego.....	0	1	0	1	0	2	1	0	1	1	0	0	0	0	7	2
Wabaunsee.....	0	1	0	0	0	1	1	0	0	0	0	0	0	0	3	6
Wallace.....	0	1	1	1	0	2	0	0	0	0	0	1	0	0	6	7
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wichita.....	0	1	0	1	1	1	0	0	0	0	1	0	0	0	1	12
Wilson.....	0	0	0	1	0	0	2	0	1	0	0	1	1	0	8	0
Woodson.....	0	0	2	4	0	0	0	0	1	1	0	0	0	1	10	10
Wyandotte, except Kansas City.....	2	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
.....	0	2	3	3	4	6	4	2	3	3	6	5	0	2	12	6
Totals.....	21	178	355	369	343	210	139	135	157	139	79	96	42	188	2,437	2,678

SMALLPOX—Continued.

TABLE VIII.—Cases reported from counties and first-class cities, by months, during 1918.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Cases per 1,000 popula- tion.
Allen.....	12	17	59	29	44	13	3	1	0	0	0	10	188	7.2
Anderson.....	5	8	3	0	6	2	3	4	0	2	1	0	34	2.8
Atchison, except Atchison city.....	1	4	28	3	2	0	0	0	0	0	0	0	38	2.9
Barber.....	3	2	5	6	9	1	0	0	1	0	0	4	31	2.0
Barton.....	3	0	1	0	0	0	0	4	0	0	0	0	8	0.8
Bourbon.....	0	22	10	3	2	11	0	0	0	0	0	0	48	3.7
Bourbon, except Fort Scott.....	9	9	23	14	10	0	0	0	0	0	0	0	65	5.4
Brown.....	6	7	11	40	21	6	1	2	0	0	0	0	94	7.6
Butler.....	6	25	23	15	19	7	2	0	0	0	0	0	97	4.6
Chase.....	21	31	77	60	49	39	4	3	0	1	2	6	298	6.3
Chautauqua.....	1	2	0	2	2	1	0	0	0	0	0	0	8	1.2
Cherokee.....	5	2	3	5	18	0	0	0	1	1	0	0	30	2.8
Cheyenne.....	95	50	62	57	74	19	3	2	2	1	0	2	367	1.7
Clark.....	3	0	4	6	3	0	0	0	0	1	0	0	16	3.2
Clay.....	0	2	10	14	3	10	0	0	0	0	0	0	39	7.8
Cloud.....	5	2	2	2	1	0	0	0	0	0	0	1	13	0.9
Cloud.....	7	7	5	16	6	4	0	0	0	0	0	0	45	2.5
Coffey.....	3	8	12	6	3	0	0	0	0	0	0	0	32	2.1
Comanche.....	1	0	12	16	0	0	0	0	0	0	0	0	40	7.5
Cowley.....	33	47	12	16	0	0	2	3	0	13	6	0	163	4.9
Crawford, except Pittsburg.....	101	59	52	47	17	4	0	0	0	0	2	0	234	6.7
Pittsburg.....	23	41	16	5	5	1	3	0	0	0	0	0	97	5.3
Decatur.....	0	2	3	21	14	2	1	0	0	0	0	0	43	5.3
Dickinson.....	7	4	16	7	6	2	0	0	0	0	0	0	42	1.6
Doniphan.....	10	3	14	12	4	6	1	1	2	0	0	0	53	3.2
Douglas.....	14	20	4	4	6	3	0	0	0	1	0	0	54	2.1
Edwards.....	1	0	4	9	9	0	3	4	0	0	0	0	30	4.4
Elk.....	4	7	14	1	0	0	0	0	0	0	0	0	26	2.1
Ellis.....	1	13	2	1	5	0	0	0	0	0	0	0	22	1.6
Ellsworth.....	2	2	3	6	0	5	0	0	0	0	0	0	19	1.8
Finney.....	1	3	0	0	0	2	0	0	0	0	0	1	6	8.1
Ford.....	2	1	2	3	2	0	0	0	0	0	0	0	10	0.7
Franklin.....	20	12	15	15	5	0	0	0	0	11	0	0	80	3.4
Geary.....	6	12	0	4	4	1	0	0	0	0	0	0	30	2.3
Gove.....	1	4	4	0	0	0	0	0	3	0	0	0	9	1.9
Graham.....	1	27	92	27	12	1	0	0	0	0	0	0	160	22.3
Grant.....	0	0	0	0	3	5	0	0	0	0	0	0	8	0.6

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Osborne.....	10	1	2	88	12	6	0	0	0	0	0	0	0	69	5.4
Ottawa.....	18	20	13	12	6	0	0	0	0	0	0	0	0	69	6.4
Pawnee.....	1	24	5	17	20	2	0	4	0	0	0	0	0	73	7.9
Phillips.....	5	17	1	3	2	0	0	0	0	0	0	0	0	28	2.2
Pottawatomie.....	2	3	7	11	2	0	0	0	0	0	0	0	0	28	1.8
Pratt.....	1	8	1	0	18	0	0	0	0	1	0	1	0	29	1.4
Rawlins.....	5	0	0	0	0	0	0	0	0	0	0	0	5	0.7	
Reno, except.....	0	1	29	35	31	0	0	0	0	0	0	0	96	4.6	
Hutchinson.....	4	8	9	15	10	8	0	0	0	0	0	0	60	2.5	
Republic.....	13	5	9	16	6	2	1	0	0	0	0	6	58	3.6	
Rice.....	1	0	7	0	1	2	0	0	0	0	0	0	11	0.8	
Riley.....	13	51	20	3	7	0	0	0	0	1	0	0	95	5.3	
Rooks.....	6	0	3	4	1	6	0	0	0	0	0	0	21	2.0	
Rush.....	0	1	0	0	2	0	1	0	0	0	0	0	3	0.4	
Russell.....	2	0	5	9	4	0	0	0	0	0	0	0	20	1.8	
Saline.....	3	21	46	29	26	7	0	1	0	0	0	0	133	5.0	
Scott.....	0	0	3	0	0	0	0	0	0	0	0	0	3	0.9	
Sedgwick, except.....	9	16	23	7	17	2	1	0	1	1	0	0	77	4.0	
Wichita.....	30	66	95	71	111	39	22	9	2	19	13	2	479	7.5	
Seward.....	15	3	10	3	8	0	1	0	0	1	2	0	48	8.0	
Shawnee, except.....	8	2	1	3	5	7	0	0	0	0	0	0	26	1.3	
Topeka.....	23	36	42	32	40	16	4	0	0	0	0	0	193	4.7	
Sheridan.....	5	1	1	5	1	0	0	0	0	0	0	0	13	2.4	
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	3	0.6	
Smith.....	7	9	6	1	2	6	0	0	0	2	0	0	34	2.2	
Stafford.....	6	2	0	9	2	8	0	0	0	0	0	0	33	9.9	
Stanton.....	0	0	0	0	0	0	2	0	2	0	0	0	2	2.0	
Stevens.....	0	1	4	9	2	1	1	5	0	0	0	0	23	6.7	
Sumner.....	10	22	12	4	3	1	0	2	0	12	10	1	79	3.0	
Thomas.....	1	0	0	1	0	0	0	0	0	0	0	0	2	0.4	
Trego.....	3	2	4	2	1	2	0	0	1	0	0	0	16	2.6	
Wabaunsee.....	0	0	8	4	0	0	0	0	0	0	0	0	16	1.4	
Wallace.....	0	0	0	0	0	0	0	0	4	0	0	0	0	0.0	
Washington.....	1	4	1	2	2	0	0	0	0	0	0	0	10	0.5	
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Wilson.....	11	14	9	2	14	8	1	0	0	0	0	0	59	2.8	
Woodson.....	49	12	3	20	6	1	0	0	0	0	0	0	97	1.1	
Wyandotte, except.....	12	25	15	11	9	0	0	0	0	0	1	0	72	4.2	
Kansas City.....	226	182	150	73	39	16	1	4	1	2	2	5	701	9.4	
Totals.....	1,383	1,879	1,519	1,160	1,022	396	115	69	31	83	51	70	7,078	4.0	

SMALLPOX—Continued.

TABLE IX.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	3	1	1	0	0	0	0	0	0	0	0	5
Anderson.....	0	0	0	10	0	5	1	2	1	0	0	0	19
Atchison, except	1	5	7	4	2	0	1	1	0	0	0	0	21
Atchison city.....	7	27	51	55	32	19	9	3	1	6	0	0	210
Barber.....	1	2	7	0	0	6	0	0	1	0	0	0	17
Barton.....	2	4	7	14	4	0	3	1	0	3	0	1	39
Bourbon, except	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Scott.....	0	0	0	0	1	0	0	0	0	0	0	0	3
Brown.....	7	4	5	2	1	0	0	0	0	0	16	0	43
Butler.....	1	13	4	6	7	25	1	2	0	2	24	18	110
Chase.....	5	0	0	0	0	0	0	0	0	0	0	0	5
Chautauqua.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Cherokee.....	3	2	1	3	1	0	0	0	0	1	0	1	18
Cherokee.....	0	0	0	3	0	1	0	0	0	7	0	1	11
Cheyenne.....	0	0	0	0	0	0	0	0	0	0	0	1	1
Clark.....	0	0	0	0	0	0	0	0	0	0	2	4	14
Clay.....	2	5	0	1	0	0	0	0	0	0	29	7	40
Cloud.....	1	0	0	0	1	0	0	0	1	0	0	0	1
Coffey.....	0	0	0	1	0	0	0	0	0	0	0	0	0
Comanche.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley.....	0	0	0	0	3	4	3	0	0	0	0	0	14
Crawford, except	0	0	0	0	10	22	4	5	0	0	0	4	57
Pittsburg.....	2	3	1	1	1	7	0	0	1	0	0	5	16
Decatur.....	0	0	0	0	0	0	1	2	0	0	0	0	3
Dickinson.....	3	0	1	0	0	0	0	0	0	0	1	0	6
Doniphan.....	0	3	1	1	2	6	1	0	0	0	1	2	29
Douglas.....	0	0	0	2	6	1	2	0	1	1	1	4	18
Edwards.....	0	0	0	2	1	3	0	0	0	0	0	0	6
Elk.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis.....	0	0	0	0	0	0	0	0	0	0	0	1	1
Ellsworth.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Finney.....	0	0	3	0	4	0	0	0	0	0	0	0	3
Ford.....	0	0	0	4	1	3	0	0	0	0	0	0	11
Franklin.....	0	0	0	1	1	0	0	0	0	0	0	0	2
Geary.....	0	2	0	1	1	0	0	0	0	0	1	0	5
Gove.....	0	0	1	0	0	0	0	0	0	0	0	0	1
Graham.....	0	0	1	1	0	0	0	0	0	0	0	0	10
Grant.....	0	0	1	0	0	0	0	0	0	0	0	0	0
Gray.....	0	4	0	0	0	0	0	0	0	1	12	8	25
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	3	9	4	1	0	0	0	0	0	0	0	0	23
Hamilton.....	0	0	0	0	0	0	1	0	0	0	0	0	1

TABLE IX.—SMALLPOX, 1919—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Russell.....	0	0	0	0	0	1	2	0	0	0	0	0	3
Saline.....	2	2	1	0	0	4	0	0	0	0	1	1	11
Scott.....	0	1	4	1	0	0	0	0	0	0	0	0	6
Sedgwick, except Wichita.....	0	1	2	0	1	0	0	0	2	1	0	1	8
Seward.....	0	0	50	18	47	109	17	0	2	0	2	6	251
Shawnee, except Topeka.....	0	0	0	1	0	0	0	0	0	0	0	0	1
Sheridan.....	1	0	1	12	3	12	4	2	0	0	1	0	4
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	36
Smith.....	0	1	1	3	2	3	0	1	0	0	3	2	1
Stafford.....	0	0	0	0	0	3	0	0	5	1	46	31	16
Stanton.....	0	0	3	0	0	1	0	0	0	0	0	0	86
Stevens.....	0	0	0	0	0	0	1	0	0	0	0	0	5
Sumner.....	0	0	0	1	0	5	0	0	0	0	0	0	0
Thomas.....	1	1	10	10	1	2	3	0	1	1	1	2	6
Trego.....	0	0	0	0	0	1	1	0	1	0	4	0	33
Wabaunsee.....	0	0	0	0	0	0	0	0	1	0	0	1	7
Wallace.....	0	1	2	0	0	0	0	2	0	0	0	1	8
Washington.....	0	0	0	0	0	0	0	0	0	0	2	0	6
Wichita.....	0	0	0	0	0	0	1	0	0	0	0	0	0
Wilson.....	0	0	0	0	3	5	0	0	0	0	0	0	8
Woodson.....	0	0	0	1	4	0	2	0	3	0	0	0	10
Wyandotte, except Kansas City.....	2	0	0	0	0	0	0	0	0	0	1	0	1
Totals.....	115	202	339	338	246	351	89	42	71	81	312	251	2,437

TABLE X.—DIPHTHERIA, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Greenwood.....	0	3	4	2	4	0	1	0	0	0	0	0	0	0	14	1
Hamilton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Harper.....	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	19
Harvey.....	0	0	4	8	2	1	1	0	2	2	0	1	0	1	22	0
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Jackson.....	0	2	6	4	0	1	1	0	0	1	0	1	0	3	19	12
Jefferson.....	0	1	2	2	0	1	0	2	0	0	1	0	0	0	10	15
Jewell.....	0	0	2	1	2	1	0	0	0	0	0	0	0	0	5	6
Johnson.....	0	0	11	5	1	2	3	0	0	0	0	0	0	0	22	13
Kearny.....	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	0
Kingman.....	0	1	1	3	1	0	0	0	0	0	0	0	0	0	8	10
Kiowa.....	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4
Labette, except Parsons.....	0	1	2	0	1	0	1	0	0	0	0	1	0	1	7	14
Lane.....	1	1	2	1	0	0	0	0	0	0	0	0	0	0	5	9
Leavenworth, except Leavenworth city.....	0	6	0	0	0	3	1	1	1	0	1	0	0	0	0	2
Lincoln.....	0	8	5	11	4	1	3	1	3	0	1	1	0	0	29	13
Linn.....	0	0	21	0	0	0	0	0	0	0	0	0	0	0	58	50
Logan.....	3	24	32	14	26	2	3	1	4	0	0	0	1	2	112	1
Lyon.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Marion.....	0	6	8	3	0	0	1	2	0	0	0	0	0	0	20	18
Marshall.....	0	0	2	1	1	0	0	0	0	0	0	0	0	0	4	21
McPherson.....	0	1	1	2	3	1	0	2	0	1	0	0	0	0	10	12
Meade.....	0	1	2	2	2	0	0	0	0	6	0	0	0	0	8	13
Miami.....	0	0	1	2	0	1	0	0	0	0	0	0	0	0	3	0
Mitchell.....	0	1	5	4	2	0	0	0	0	0	0	0	0	0	12	7
Montgomery, except Codfreyville.....	0	2	8	1	1	1	0	0	1	0	0	0	0	2	16	13
Morris.....	0	5	6	6	5	0	1	1	0	1	1	0	0	0	24	31
Morton.....	0	6	2	4	0	1	0	1	0	0	0	0	0	0	15	23
Nemaha.....	0	0	2	1	0	1	0	1	0	0	0	0	0	0	5	6
Neosho.....	0	3	0	1	1	0	1	0	0	0	0	0	0	0	0	1
Ness.....	0	3	6	1	2	1	0	0	0	0	0	0	0	1	15	34
Norton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Osborne.....	0	1	0	0	0	0	0	2	0	0	0	0	0	0	4	7
Ottawa.....	0	4	3	2	1	1	0	0	0	0	0	0	0	1	11	9
Pawnee.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Phillips.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	0	4	3	3	2	0	0	0	0	1	0	0	0	1	14	19

TABLE XI.—DIPHTHERIA, 1919—CONCLUDED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Rush.....	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	2
Russell.....	0	0	1	1	0	0	0	0	0	0	0	0	0	1	3	4
Saline.....	0	6	24	5	4	2	3	0	2	1	0	0	0	4	52	7
Scott.....	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Sedgwick, except Wichita.....	0	1	6	4	1	0	0	0	0	1	0	0	0	0	13	15
Seward.....	0	16	44	23	10	3	8	2	3	3	0	0	0	2	114	35
Shawnee, except Topeka.....	0	1	2	1	0	0	0	0	1	0	0	0	0	0	5	1
Sheridan.....	0	3	3	1	0	0	0	0	0	0	0	0	0	2	9	14
Sherman.....	0	10	31	8	10	7	4	4	3	2	1	0	1	5	86	72
Smith.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Stafford.....	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3	2
Stanton.....	0	1	0	1	0	1	0	0	0	0	0	0	0	0	5	4
Stevens.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
Stunner.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas.....	0	9	43	13	7	1	2	0	1	0	0	0	0	0	76	31
Trego.....	0	0	1	1	0	0	0	0	0	0	0	0	0	1	3	4
Wabaunsee.....	0	1	1	2	0	0	1	1	0	0	0	0	0	0	6	1
Wallace.....	0	4	4	6	0	1	2	1	0	1	0	0	0	1	20	3
Washington.....	0	0	0	6	0	0	1	0	0	0	0	0	0	1	8	0
Wichita.....	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0
Wilson.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodson.....	0	5	27	18	4	1	1	1	1	1	0	0	0	0	60	15
Wyandotte, except Kansas City.....	0	1	0	1	0	0	0	0	1	0	0	0	0	0	3	6
Wyandotte, except Kansas City.....	0	3	5	2	0	0	0	0	0	0	0	0	0	0	10	14
Kansas City.....	1	48	82	31	16	8	7	7	4	4	2	0	0	6	216	141
Totals.....	16	361	747	364	194	99	76	54	89	27	13	6	5	76	2,077	1,222

DIPHTHERIA—Continued.

TABLE XIII.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	2	1	1	0	1	0	1	0	0	0	1	7
Anderson.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except Atchison city.....	3	2	3	2	1	0	2	0	0	2	1	1	5
Barber.....	0	0	0	0	0	0	0	0	1	0	0	0	21
Barton.....	0	2	0	0	0	0	0	0	0	0	0	0	7
Bourbon, except Fort Scott.....	2	0	1	0	0	0	0	1	0	1	0	0	4
Brown.....	0	1	1	0	1	0	0	0	0	0	0	0	3
Butler.....	0	0	0	3	0	0	0	1	0	0	2	0	6
Chase.....	3	6	0	1	2	1	0	3	11	55	47	23	152
Chautauqua.....	0	0	0	1	0	0	0	0	0	0	0	0	1
Cherokee.....	0	0	0	0	0	0	0	1	3	10	8	0	23
Cheyenne.....	3	2	1	4	0	0	0	2	2	3	10	13	40
Clark.....	0	0	0	0	0	0	0	0	0	0	0	1	1
Clay.....	1	0	0	0	0	0	0	0	0	0	0	2	3
Cloud.....	0	0	1	4	5	2	0	0	0	0	3	5	22
Coffey.....	0	0	0	3	0	0	0	0	0	4	2	7	16
Comanche.....	1	1	0	0	0	0	0	2	1	0	0	1	6
Cowley.....	0	0	0	0	0	0	3	2	0	0	0	0	3
Crawford, except Pittsburg.....	2	1	1	2	1	2	4	2	0	3	7	4	19
Decatur.....	0	0	0	0	0	1	0	0	5	3	1	7	32
Dickinson.....	0	1	0	0	0	0	0	0	0	4	1	2	10
Doniphan.....	0	0	0	1	1	0	0	0	0	0	1	0	1
Douglas.....	1	0	0	2	3	1	1	0	2	5	3	4	20
Edwards.....	2	0	0	0	0	0	0	0	0	17	10	9	45
Elk.....	0	0	0	0	0	0	1	0	2	0	0	4	31
Ellis.....	0	0	0	0	0	0	1	0	0	8	0	1	1
Ellsworth.....	0	0	0	0	0	0	0	5	1	0	4	4	13
Finney.....	1	0	0	1	0	0	0	0	0	0	1	2	5
Ford.....	0	2	0	0	1	3	2	0	2	0	10	1	3
Franklin.....	5	2	0	0	0	0	0	0	0	8	1	1	23
Geary.....	0	1	0	0	0	0	0	0	5	0	12	7	9
Gove.....	0	0	4	0	2	0	0	2	0	57	0	0	90
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	4
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton.....	0	0	0	2	0	0	0	1	2	4	10	2	23

[illegible]

TABLE XIII.—DIPHTHERIA, 1919—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Saline.....	0	0	2	0	0	0	1	0	8	18	10	23	52
Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except.....	0	0	1	1	0	0	0	2	4	0	3	2	13
Wichita.....	1	1	1	1	3	3	4	4	4	28	30	84	114
Seward.....	0	1	0	0	0	0	0	0	2	1	1	0	5
Shawnee, except.....	0	1	1	1	4	1	0	0	0	1	0	0	9
Topeka.....	3	6	2	1	4	6	3	2	8	11	21	19	86
Sheridan.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Sherman.....	0	0	0	0	0	0	0	1	2	0	0	0	3
Smith.....	0	0	2	1	1	0	1	0	0	0	0	0	5
Stafford.....	1	0	1	0	0	0	0	0	0	0	0	0	2
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	0	0	1	0	0	0	0	0	2	0	0	3
Sumner.....	0	8	0	1	2	0	1	0	7	23	22	14	76
Thomas.....	0	0	0	1	0	0	0	1	0	1	0	0	3
Trego.....	0	0	0	0	0	0	2	1	0	1	1	1	6
Wabaunsee.....	0	0	0	0	4	0	2	1	1	0	2	2	20
Wallace.....	6	0	4	5	0	0	2	0	0	0	0	0	8
Washington.....	0	2	0	0	0	0	0	1	0	0	0	0	2
Wichita.....	0	0	0	0	0	0	1	1	0	0	0	0	0
Wilson.....	0	1	1	0	2	0	2	0	1	28	19	8	60
Woodson.....	0	0	0	0	0	2	0	1	0	0	3	0	3
Wyandotte, except.....	0	0	1	0	0	0	0	0	0	0	5	0	10
Kansas City.....	14	19	14	11	7	11	6	2	6	43	52	31	216
Totals.....	107	86	98	103	92	58	60	59	128	471	463	352	2,077

DIPHTHERIA—Continued.

TABLE XIV.—Cases and deaths reported from 1914 to 1919.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Allen.....	66	7	128	5	59	8	20	2	14	6	7	0
Anderson.....	4	2	5	1	8	1	2	5	6	7	0	0
Atchison, except.....	2	2	4	1	1	1	1	1	1	1	5	3
Atchison city.....	2	1	24	2	9	0	11	4	30	4	21	2
Barber.....	0	0	41	5	2	4	0	0	2	0	0	0
Barton.....	14	2	39	4	37	1	4	4	16	0	7	2
Bourbon, except.....	15	1	9	1	16	0	16	1	6	1	4	0
Fort Scott.....	8	1	23	1	20	2	24	3	5	1	8	0
Brown.....	6	3	16	3	7	4	17	0	7	1	6	1
Butler.....	25	8	41	10	38	10	27	3	44	4	152	5
Chase.....	3	2	3	1	8	1	1	8	2	1	1	1
Chautauqua.....	23	3	26	2	16	2	8	3	11	2	23	2
Cherokee.....	50	4	33	16	33	2	42	5	9	1	40	3
Cheyenne.....	0	0	2	1	0	0	13	0	0	0	1	1
Clark.....	4	0	1	1	3	1	2	1	0	0	3	0
Clay.....	8	1	3	0	3	3	3	3	0	0	8	6
Cloud.....	10	1	18	3	3	0	20	5	6	0	22	2
Coffey.....	17	0	9	0	13	2	2	1	5	0	16	0
Comanche.....	75	0	2	0	1	0	2	2	2	1	6	0
Cowley.....	75	5	25	3	27	1	29	2	14	3	3	0
Crawford, except.....	103	14	149	10	46	2	36	8	23	0	19	2
Pittsburg.....	73	2	45	5	18	0	20	0	9	2	32	0
Decatur.....	1	1	1	1	2	0	9	5	0	0	10	1
Dickinson.....	8	2	18	0	23	3	35	1	0	1	1	2
Doniphan.....	8	1	16	2	30	1	20	1	15	3	20	4
Douglas.....	21	0	33	4	18	1	10	0	13	1	45	2
Edwards.....	0	0	3	1	1	0	0	0	10	1	31	1
Elk.....	13	1	28	3	1	0	0	2	1	8	1	2
Ellis.....	14	2	2	2	15	3	15	0	1	1	13	1
Ellsworth.....	15	1	50	1	6	1	1	3	1	4	5	0
Finney.....	5	1	3	0	6	2	4	1	5	5	3	0
Ford.....	3	1	3	1	12	7	5	6	6	3	23	2
Franklin.....	29	3	19	4	7	6	13	0	75	8	90	3
Geary.....	5	1	13	0	6	0	17	1	1	1	4	1
Gove.....	0	0	0	0	6	0	0	0	0	0	0	0
Graham.....	0	0	1	0	6	0	11	0	1	0	0	0
Grant.....	0	0	0	0	0	0	2	0	0	0	0	0
Gray.....	1	0	6	1	1	0	0	0	0	0	0	0

TABLE XIV.—DIPHTHERIA, 1914 TO 1919—CONCLUDED.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	13	1	19	5	22	5	9	1	14	1	23	6
Hamilton.....	0	0	0	0	0	0	0	0	0	0	1	0
Harper.....	10	1	7	0	9	0	7	0	2	0	12	1
Harvey.....	12	3	9	0	41	2	14	0	22	2	15	3
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	0	0	0	0	0	0	0	0	0	0	0
Jackson.....	7	0	9	2	2	0	1	1	19	1	5	1
Jefferson.....	11	1	22	1	11	2	18	0	10	1	9	1
Jewell.....	3	1	0	0	1	0	5	1	5	0	4	1
Johnson.....	8	0	26	2	25	2	8	2	22	1	10	2
Kearny.....	0	0	0	0	0	0	0	0	3	1	7	0
Kingman.....	1	0	22	2	8	0	3	0	8	1	38	1
Klowa.....	8	1	9	3	4	1	7	1	0	0	0	0
Labette, except Parsons.....	70	8	88	2	11	0	7	2	7	1	24	2
Lane.....	76	3	86	3	20	2	7	0	5	0	0	0
Leavenworth, except Leavenworth city.....	4	0	16	3	12	1	4	1	29	5	38	6
Lincoln.....	65	1	22	4	65	2	44	4	58	4	98	6
Linn.....	7	5	34	2	57	6	20	2	112	0	10	4
Logan.....	10	0	0	0	0	0	0	0	1	2	0	0
Lyon.....	13	2	48	5	7	0	0	6	20	2	18	4
Marion.....	4	0	34	4	38	0	48	2	20	6	13	2
Marshall.....	4	2	12	3	18	8	17	2	4	0	36	5
McPherson.....	8	1	15	3	28	3	10	2	10	0	39	3
Meade.....	1	0	0	0	2	1	15	1	8	1	6	0
Miami.....	6	0	2	0	2	1	0	0	3	0	0	0
Mitchell.....	7	0	8	1	14	3	1	0	12	2	6	1
Montgomery, except Coffeeville.....	40	6	87	7	5	0	46	3	16	1	2	1
Morris.....	19	0	56	4	28	5	70	7	24	2	69	6
Morton.....	1	0	12	0	21	2	18	0	15	1	74	4
Nemaha.....	0	0	10	0	13	2	4	2	5	0	13	3
Neosho.....	5	5	2	1	1	0	1	1	0	0	30	5
Ness.....	40	1	46	4	60	3	22	1	15	0	13	0
Norton.....	2	0	1	0	0	0	0	0	0	0	0	0
Osage.....	0	0	10	1	2	0	3	0	0	0	1	0
Osborne.....	41	1	10	0	10	3	2	1	4	0	2	2
Ottawa.....	0	0	13	2	28	3	3	1	11	3	3	4

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[illegible]

TABLE XV.—SCARLET FEVER, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Rooks.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	9
Rush.....	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	2
Russell.....	0	0	4	1	0	1	0	0	0	0	0	0	0	0	6	6
Saline.....	0	5	6	11	4	2	1	0	2	0	0	0	0	14	45	8
Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita.....	0	2	10	3	1	1	1	1	0	0	0	0	0	1	19	20
Seward.....	2	15	24	17	8	3	2	1	0	1	0	0	0	0	73	9
Shawnee, except Topeka.....	2	9	17	8	6	1	0	0	0	0	0	0	0	2	45	17
Topeka.....	1	46	108	100	41	17	5	6	0	1	0	1	0	1	327	39
Sheridan.....	0	0	3	1	0	0	0	0	0	0	0	0	0	0	4	16
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Smith.....	2	3	1	5	3	0	0	0	0	0	0	0	0	0	15	15
Stafford.....	1	5	6	4	8	2	0	1	1	0	1	0	0	0	29	8
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sumner.....	2	19	31	27	20	4	5	1	1	0	0	1	0	2	113	29
Thomas.....	0	2	3	2	1	0	0	0	0	0	0	0	0	0	8	1
Trego.....	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4	9
Wabaunsee.....	0	4	7	14	7	2	1	0	0	0	0	0	0	1	36	12
Wallace.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington.....	0	0	2	3	1	0	0	0	0	0	0	0	0	0	6	6
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	0	4	5	4	1	2	0	0	0	0	0	0	0	0	16	16
Woodson.....	0	0	0	4	2	0	0	0	0	0	0	0	0	0	6	7
Wyandotte, except Kansas City.....	0	1	2	4	1	0	0	0	1	0	0	0	0	2	11	11
Totals.....	29	442	980	884	439	156	86	40	29	13	5	5	0	99	3,097	2,019

TABLE XVI.—SCARLET FEVER, 1919—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Greenwood.....	0	15	30	14	0	3	1	2	0	0	0	0	0	0	65	87
Hamilton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Harper.....	0	6	11	4	0	0	2	0	0	0	0	0	0	0	25	23
Harvey.....	0	4	9	4	2	0	0	0	0	0	0	0	0	1	20	12
Haskell.....	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
Hodgeman.....	0	2	1	0	0	1	0	0	0	0	0	0	0	0	4	4
Jackson.....	0	1	3	0	0	0	0	0	0	0	0	0	0	1	7	16
Jefferson.....	2	6	22	8	2	1	0	0	0	2	0	0	0	0	43	19
Jewell.....	0	5	3	0	0	1	0	0	0	0	0	0	0	0	9	11
Johnson.....	1	3	6	1	1	1	0	0	0	0	0	0	0	0	16	31
Kearny.....	0	0	7	1	0	0	0	0	0	0	0	0	0	0	8	2
Kingman.....	0	7	9	7	4	1	0	0	0	0	0	0	0	0	30	14
Kiowa.....	3	4	3	5	3	1	0	0	0	1	0	0	0	0	19	2
Labette, except Parsons.....	0	7	17	2	0	1	0	0	0	0	0	0	0	0	27	9
Lane.....	0	4	15	7	0	0	2	0	0	0	0	0	0	1	29	17
Leavenworth, except Leavenworth city	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lincoln.....	0	3	4	6	4	2	0	0	0	1	0	0	0	0	20	18
Linn.....	1	5	16	8	3	0	0	0	0	0	0	0	0	0	15	34
Logan.....	0	3	12	5	2	3	0	1	0	0	0	0	0	0	32	3
Lyon.....	0	1	1	1	0	0	1	0	0	0	0	0	0	0	4	3
Marion.....	0	1	5	3	1	2	0	0	0	0	0	0	0	0	12	31
Marshall.....	0	6	5	6	1	0	0	0	1	0	0	0	0	0	20	26
McPherson.....	0	12	17	13	4	1	0	0	0	0	0	0	0	1	48	12
Meade.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	27
Miami.....	0	0	5	1	0	0	0	0	0	0	0	0	0	0	6	2
Mitchell.....	0	2	1	2	0	0	0	0	1	0	0	0	0	0	6	17
Montgomery, except Coffeyville.....	0	2	0	1	0	1	0	0	0	0	0	0	0	2	6	21
Morris.....	0	4	21	12	3	1	0	0	0	0	0	0	0	0	41	30
Morton.....	0	2	11	12	3	1	1	0	0	0	0	0	0	0	30	7
Nemaha.....	1	23	26	21	9	1	2	1	1	0	0	0	0	2	87	14
Neosho.....	0	1	5	3	1	0	1	0	0	0	0	0	0	0	11	1
Neosho.....	1	6	10	2	3	1	1	0	0	0	0	0	0	0	25	7
Neosho.....	0	10	27	13	8	1	1	0	0	0	0	0	0	2	67	16
Neosho.....	0	2	3	1	3	0	0	0	0	0	0	0	0	0	9	4
Norton.....	1	2	2	2	3	0	0	0	0	0	0	0	0	0	10	12
Osage.....	0	3	4	3	0	0	0	0	0	0	0	0	0	0	10	7
Osborne.....	0	1	1	2	1	0	0	0	0	0	0	0	0	0	5	6
Ottawa.....	0	2	6	2	3	1	0	0	0	0	0	0	0	0	14	21
Pawnee.....	0	3	9	10	1	1	0	0	0	0	0	0	0	0	26	3
Phillips.....	1	1	2	1	1	0	0	1	0	0	0	0	0	0	5	9

SCARLET FEVER—Continued.

TABLE XVII.—Cases reported from counties and first-class cities, by months, during 1918.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Cases per 1,000 popula- tion.
Allen.....	8	0	0	0	0	0	0	0	2	0	0	0	10	0.6
Anderson.....	2	1	0	1	1	0	0	0	0	0	1	0	7	0.5
Atchison, except.....	3	7	7	0	0	0	0	0	0	0	0	0	17	1.4
Atchison city.....	1	1	1	0	1	0	0	0	1	0	1	0	6	0.3
Barber.....	0	1	0	0	1	0	0	1	0	0	0	0	4	0.4
Barton.....	1	1	7	12	8	0	1	1	1	0	1	0	47	2.6
Bourbon, except.....	3	1	1	0	0	0	0	0	0	0	1	1	10	0.8
Fort Scott.....	1	0	0	0	1	0	0	0	0	0	0	0	2	0.2
Brown.....	9	6	2	12	6	0	0	0	2	2	0	2	41	1.9
Butler.....	45	15	6	13	15	8	2	2	12	11	5	4	188	2.9
Chase.....	2	1	2	4	5	0	0	0	2	5	0	1	24	3.6
Chautauqua.....	1	0	4	0	0	0	0	0	0	0	4	0	9	0.9
Cherokee.....	0	1	0	2	0	0	0	0	0	1	1	1	6	0.2
Cheyenne.....	0	0	4	6	3	0	0	1	0	0	0	0	17	3.5
Clark.....	0	0	1	0	0	0	0	0	0	0	0	0	1	0.2
Clay.....	8	11	44	17	6	1	0	0	0	0	0	0	87	5.6
Cloud.....	1	1	0	2	0	1	0	1	0	0	1	0	7	0.4
Coffey.....	0	0	0	1	0	0	0	0	0	0	0	0	1	0.1
Comanche.....	5	0	0	1	1	0	0	0	0	0	0	0	7	1.3
Cowley.....	4	0	5	4	3	2	1	1	0	3	2	0	25	0.7
Crawford, except.....	2	8	4	0	10	2	0	1	0	1	0	0	29	0.6
Pittsburg.....	1	6	2	5	1	0	0	0	1	0	0	0	15	0.8
Decatur.....	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1
Dickinson.....	5	3	1	2	2	1	0	0	5	3	3	5	30	1.1
Doniphan.....	1	0	0	0	3	0	0	0	1	1	2	3	17	1.0
Douglas.....	10	0	0	0	1	0	0	0	26	16	2	6	81	3.2
Edwards.....	0	2	7	2	1	0	8	10	0	0	0	0	13	1.9
Elk.....	0	0	0	0	2	0	0	0	3	0	0	0	9	0.9
Ellis.....	0	0	0	0	0	0	5	0	0	1	0	0	5	0.3
Ellsworth.....	0	0	0	5	0	0	0	0	0	0	0	0	3	0.3
Finney.....	1	1	1	0	1	0	0	0	0	0	0	0	6	0.8
Ford.....	9	14	32	17	16	0	0	0	1	0	1	7	105	7.3
Franklin.....	10	0	7	8	6	3	2	1	2	2	1	2	44	1.9
Geary.....	8	5	6	1	1	0	0	1	1	2	2	4	31	2.4

Gove.....	15	3	2
Graham.....	11	1	5
Grant.....	0	0	0
Gray.....	10	2	1
Greeley.....	0	0	0
Greenwood.....	18	1	2
Hamilton.....	0	0	0
Harper.....	52	4	1
Harvey.....	12	0	6
Haskell.....	0	0	0
Hodgeman.....	4	1	0
Jackson.....	17	1	1
Jefferson.....	19	1	2
Jewell.....	33	5	3
Johnson.....	31	1	8
Kearny.....	0	0	0
Kingman.....	12	1	0
Kiowa.....	38	6	0
Labette, except.....	9	0	5
Parsons.....	3	0	1
Lane.....	0	0	0
Leavenworth, except.....	51	2	6
Leavenworth city.....	26	1	2
Lincoln.....	7	0	7
Linn.....	12	0	8
Logan.....	8	2	3
Lyon.....	64	2	5
Marion.....	23	1	2
Marshall.....	70	3	2
McPherson.....	0	0	0
Meade.....	31	1	6
Miami.....	27	2	0
Mitchell.....	31	9	0
Montgomery, except.....	51	3	7
Coffeyville.....	22	1	4
Morris.....	0	0	0
Morton.....	56	3	0
Nemaha.....	14	0	6
Neosho.....	6	0	8
Ness.....	36	3	1
Norton.....	29	1	4
Osage.....	7	0	5
Osborne.....	21	2	0
Ottawa.....	1	0	1
Pawnee.....	12	0	9
Phillips.....	24	1	6
Pottawatomie.....	12	0	9
Pratt.....	4	0	6
Rawlins.....			

TABLE XVII.—SCARLET FEVER, 1918—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Cases per 1,000 population.
Reno, except.	5	1	2	1	4	0	0	0	0	0	0	1	15	0.7
Hutchinson	24	50	29	13	1	2	2	0	0	0	0	0	123	5.0
Republic.	6	5	3	12	1	1	1	0	5	3	1	3	43	2.6
Rice.	8	2	9	1	0	0	0	0	0	0	0	0	15	1.0
Riley.	14	15	24	26	2	2	0	1	0	0	2	6	91	5.1
Rooks.	0	0	0	0	1	0	0	0	0	0	0	0	1	0.1
Rush.	0	2	0	0	0	0	0	0	0	0	0	0	2	0.2
Russell.	0	0	6	0	0	0	0	0	0	0	0	0	6	0.5
Saline.	2	5	9	11	1	0	0	1	0	3	2	1	45	1.9
Scott.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sedgwick, except.	4	0	1	7	6	1	0	0	0	0	0	0	19	0.9
Wichita.	27	10	15	7	4	4	0	0	0	0	5	1	78	1.1
Seward.	0	0	1	7	0	0	0	1	1	0	0	0	10	1.6
Shawnee, except.	16	5	6	7	6	0	0	0	0	0	0	0	45	2.3
Topeka.	55	50	73	80	44	4	4	5	4	4	2	2	327	8.0
Sheridan.	3	0	1	0	0	0	0	0	0	0	0	0	4	0.7
Sherman.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Smith.	9	2	0	2	0	2	0	0	0	0	0	0	15	1.0
Stafford.	1	7	13	0	0	1	0	0	1	0	4	2	29	2.5
Stanton.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens.	0	0	1	0	0	0	0	0	0	0	0	0	1	0.3
Sumner.	10	23	44	13	7	2	1	2	1	5	1	4	113	4.3
Thomas.	0	0	0	3	0	0	0	2	0	0	3	0	8	1.6
Trego.	3	0	0	0	0	0	0	1	0	0	0	0	4	0.6
Wabaunsee.	24	0	0	7	3	2	0	0	0	0	0	0	36	3.1
Wallace.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington.	2	0	1	2	1	0	0	0	0	0	0	0	6	0.3
Wichita.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wilson.	5	0	0	4	2	3	0	0	0	0	0	1	16	0.7
Woodson.	5	1	0	0	0	0	0	0	0	1	0	0	6	0.6
Wyandotte, except.	1	1	4	2	2	0	0	0	0	0	0	0	11	0.6
Kansas City.	58	25	20	21	26	4	0	0	1	2	1	4	162	1.7
Totals.	614	449	562	530	325	136	48	44	107	111	90	81	3,097	1.7

SCARLET FEVER--Continued.
TABLE XVIII.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	0	0	0	3	0	0	0	0	1	2	11	17
Anderson.....	1	0	1	0	1	0	0	0	0	0	0	2	5
Atchison, except Atchison city.....	1	0	3	6	3	0	0	0	0	0	0	0	13
Barber.....	2	4	11	9	23	12	2	0	1	2	5	1	65
Barton.....	0	0	1	0	0	0	0	0	0	0	5	0	8
Bourbon, except Fort Scott.....	0	5	1	0	1	1	0	0	0	1	2	11	25
Brown.....	0	0	0	0	0	0	0	0	0	0	9	6	16
Butler.....	0	1	1	1	4	2	0	0	0	4	0	4	7
Brown.....	1	10	3	11	6	8	0	1	1	20	11	6	42
Butler.....	3	3	0	0	0	1	5	4	4	3	18	6	101
Chase.....	1	3	0	0	0	1	0	0	0	0	3	0	30
Chautauque.....	0	1	1	1	0	0	0	0	0	0	0	0	3
Cherokee.....	6	2	4	0	2	0	0	1	0	10	16	4	45
Cheyenne.....	0	0	5	0	1	0	0	0	0	0	3	0	22
Clark.....	1	0	0	0	1	0	0	0	1	7	1	13	12
Clay.....	0	9	7	0	1	0	0	0	0	8	15	16	58
Cloud.....	1	1	0	2	1	1	0	0	0	1	0	1	7
Coffey.....	6	1	1	1	0	2	0	0	1	14	10	16	42
Comanche.....	0	0	0	0	1	0	0	0	0	0	0	1	2
Cowley.....	0	2	0	3	18	7	6	3	6	13	14	10	82
Crawford, except Pittsburg.....	2	15	20	12	11	8	1	0	2	5	3	1	82
Pittsburg.....	1	1	1	2	6	2	0	0	0	2	4	0	19
Decatur.....	0	0	3	6	11	2	0	0	2	15	6	9	50
Dickinson.....	1	7	0	1	15	0	0	1	0	7	7	8	56
Doniphan.....	1	2	2	4	12	0	0	0	1	0	1	3	31
Douglas.....	5	1	14	8	0	1	0	6	3	5	0	7	50
Edwards.....	0	1	0	0	0	0	0	1	2	2	0	9	14
Elk.....	0	3	0	0	1	0	0	0	0	0	2	4	12
Ellis.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellsworth.....	0	0	7	8	0	1	0	0	0	0	0	0	16
Finney.....	0	0	1	0	0	0	0	0	0	0	0	1	2
Ford.....	4	0	1	8	2	3	1	1	20	24	18	39	120
Franklin.....	6	12	0	0	1	1	0	6	3	6	3	2	23
Geary.....	0	0	12	4	1	0	0	1	1	1	5	3	46
Gove.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham.....	0	0	0	0	0	0	1	0	0	0	0	0	1
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	1	0	0	0	1	0	0	0	0	3	20	26
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	15	29	11	1	5	0	1	0	0	0	0	65
Hamilton.....	0	0	0	0	0	0	0	0	3	0	0	0	0

SCARLET FEVER—Continued.

TABLE XIX.—Cases and deaths reported from 1914 to 1919.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Allen.....	3	0	26	0	24	1	47	1	10	0	17	0
Anderson.....	3	0	4	1	20	0	2	0	7	0	5	0
Atchison, except Atchison city.....	5	0	7	0	1	0	1	0	17	1	18	1
Barber.....	30	2	32	1	21	1	12	0	5	0	65	0
Barton.....	0	0	0	0	11	0	0	0	4	0	8	1
Bourbon.....	15	0	14	1	56	1	54	1	47	2	25	2
Bourbon, except Fort Scott.....	1	1	12	0	6	0	5	0	10	0	16	0
Brown.....	8	1	3	0	6	0	3	0	2	0	7	0
Brown, except Fort Scott.....	8	1	3	1	29	2	61	2	41	0	42	0
Butler.....	8	0	10	1	44	3	115	1	138	1	101	1
Butler, except Fort Scott.....	5	1	6	0	34	1	33	1	24	1	30	0
Chase.....	12	0	12	0	8	1	7	1	9	0	3	0
Chautauque.....	10	0	20	0	5	0	14	0	6	0	45	0
Cherokee.....	1	0	14	0	0	0	4	0	17	0	22	1
Cheyenne.....	9	0	5	0	10	0	8	0	1	0	12	0
Clark.....	41	0	20	0	12	0	11	0	87	1	58	1
Clay.....	32	0	17	0	27	1	44	0	7	0	7	2
Cloud.....	10	0	15	0	18	0	25	0	1	0	42	0
Coffey.....	0	0	0	0	0	0	19	0	7	0	2	1
Comanche.....	7	0	53	2	23	0	45	1	25	2	72	0
Cowley.....	7	1	7	1	18	2	7	2	29	0	82	1
Crawford, except Pittsburg.....	27	1	8	0	3	0	6	0	15	1	19	0
Decatur.....	0	0	4	0	3	0	9	0	1	0	50	1
Dickinson.....	2	0	5	0	20	0	50	0	30	0	56	1
Doniphan.....	2	0	40	0	74	0	30	0	17	0	31	0
Douglas.....	11	0	16	0	36	0	33	0	81	1	50	1
Edwards.....	3	0	5	0	6	1	19	0	13	0	14	1
Elk.....	18	0	7	0	2	0	3	0	9	0	12	0
Ellis.....	0	0	7	0	4	0	4	0	5	0	0	0
Ellsworth.....	1	0	15	1	25	1	13	0	3	0	16	0
Finney.....	0	1	0	0	49	0	14	0	6	0	2	0
Ford.....	13	0	11	1	29	0	62	4	105	0	120	3
Franklin.....	11	0	12	0	20	0	51	0	44	1	23	0
Geary.....	3	0	21	0	2	0	29	0	31	8	46	4
Gove.....	0	0	12	0	0	0	42	1	16	0	0	0
Graham.....	3	0	32	1	24	1	5	0	11	0	1	0
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	7	0	1	0	7	1	10	0	10	0	26	0

TABLE XIX.—SCARLET FEVER, 1914 TO 1919—CONCLUDED.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Rooks.....	11	0	9	0	6	0	25	0	1	0	0	0
Rush.....	0	0	0	0	13	0	20	0	2	0	8	0
Russell.....	0	0	26	0	9	0	2	0	6	0	30	1
Saline.....	0	0	8	0	5	0	19	0	45	1	25	0
Scott.....	0	0	0	0	15	0	7	0	0	0	2	0
Sedgwick, except	21	0	25	0	20	0	11	0	19	2	17	0
Wichita.....	43	1	120	0	71	2	187	0	73	1	67	1
Seward.....	9	0	12	0	4	1	5	0	10	1	15	0
Shawnee, except.	0	0	4	0	21	0	17	1	45	3	5	0
Topeka.....	30	0	27	0	39	3	128	3	327	6	26	0
Sheridan.....	0	0	16	1	22	1	28	1	4	0	0	0
Sherman.....	0	0	3	0	3	0	5	0	0	0	1	0
Smith.....	0	0	5	0	39	2	41	1	15	0	21	0
Stafford.....	1	0	8	0	1	0	10	0	29	0	19	0
Stanton.....	3	0	0	0	0	0	0	0	0	0	10	0
Stevens.....	0	0	14	1	2	0	0	0	1	0	27	0
Sumner.....	10	0	20	0	32	0	29	0	113	0	87	1
Thomas.....	0	0	1	0	5	3	1	0	8	0	41	2
Trego.....	13	0	9	0	1	0	30	0	4	0	11	0
Wabaunsee.....	0	0	1	0	63	3	12	0	36	1	20	0
Wallace.....	0	0	0	0	1	0	1	0	0	0	0	0
Washington.....	2	0	17	0	10	0	0	0	6	0	9	0
Wichita.....	0	0	0	0	0	0	15	0	0	0	1	0
Wilson.....	10	1	33	0	8	0	37	0	16	1	19	0
Woodson.....	6	0	2	0	8	0	7	0	6	0	18	0
Wyandotte, except	3	0	7	1	38	2	48	3	11	0	6	0
Kansas City.....	41	8	71	4	166	12	449	8	162	7	75	4
Totals.....	870	35	1,457	35	2,249	57	3,483	54	3,097	72	2,754	49
Cases fatality.....		4.0		2.4		2.5		1.5		2.3		1.7

TABLE XX.—MEASLES, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Greenwood.....	3	24	26	31	19	12	7	0	2	2	0	0	0	7	133	133
Hamilton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper.....	0	15	15	6	3	2	2	0	1	0	0	1	0	0	45	60
Harvey.....	0	10	7	4	1	3	1	0	0	2	0	1	0	1	32	40
Haskell.....	0	2	2	2	0	2	0	0	1	0	0	0	0	0	9	6
Hodgeman.....	0	1	0	0	1	2	0	0	0	0	0	0	0	0	4	34
Jackson.....	0	6	6	9	5	3	0	1	0	0	1	0	0	3	34	101
Jefferson.....	3	17	27	19	26	11	5	4	6	1	1	1	1	0	122	78
Jewell.....	2	9	17	15	15	7	2	5	3	1	1	0	0	0	78	55
Johnson.....	0	1	30	9	6	3	2	2	0	0	0	0	0	2	61	5
Kearny.....	1	5	15	19	13	4	1	0	1	1	0	0	0	0	37	87
Kingman.....	0	8	8	10	6	2	0	1	0	2	0	0	0	0	46	46
Kiowa.....	3	13	16	6	5	2	0	1	0	0	0	0	0	0	99	82
Labette, except Parsons.....	1	19	16	9	14	8	6	2	2	1	0	0	0	20	27	57
Lane.....	0	6	7	1	1	6	2	4	0	0	0	0	0	0	2	2
Leavenworth, except Leavenworth city.....	0	1	0	0	0	1	0	0	0	0	0	0	0	18	153	73
Lincoln.....	2	15	52	34	21	8	5	0	1	1	0	0	0	1	175	175
Linn.....	4	51	81	26	7	3	2	0	2	0	0	0	0	1	116	116
Lyon.....	2	24	38	18	15	6	3	1	0	1	0	0	1	0	90	59
Logan.....	1	10	24	3	21	4	1	1	0	2	0	0	0	0	8	1
Lyons.....	0	6	1	3	1	1	1	1	7	0	1	0	0	0	172	172
Marion.....	3	4	30	18	43	16	12	8	4	2	1	0	0	4	218	183
Marshall.....	5	33	59	40	34	10	4	2	1	1	1	0	0	1	68	68
McPherson.....	1	13	11	12	11	6	3	1	1	0	1	0	0	10	64	64
Meade.....	1	12	11	9	9	1	0	1	1	0	0	0	0	0	10	10
Miami.....	1	3	2	1	0	1	0	1	1	0	0	0	0	0	10	10
Mitchell.....	1	10	21	22	24	17	4	6	4	4	2	0	2	11	128	42
Montgomery, except Coffeyville.....	6	32	44	33	40	12	3	5	4	2	0	1	0	15	197	43
Morris.....	0	23	51	26	13	22	8	11	5	3	0	0	0	11	178	178
Morton.....	4	32	50	29	21	24	13	12	7	3	2	1	0	2	200	105
Morton.....	0	6	8	0	3	3	2	0	0	0	0	0	0	0	22	22
Morton.....	1	0	10	2	2	2	1	0	0	0	0	0	0	0	18	8
Nemaha.....	0	2	1	3	1	1	0	0	1	0	0	0	0	0	9	19
Neosho.....	7	44	91	85	83	19	10	5	6	7	2	1	1	32	348	170
Ness.....	1	10	16	14	5	0	0	0	1	0	0	0	0	0	47	19
Norton.....	0	2	3	1	3	1	0	0	0	0	0	0	0	0	10	16
Osage.....	1	9	11	7	8	7	2	3	1	0	0	0	0	1	60	75
Osborne.....	3	33	57	29	31	11	10	3	5	2	0	0	0	13	197	121
Ottawa.....	3	4	24	25	26	6	4	0	0	2	0	0	0	1	96	96
Pawnee.....	0	4	1	2	1	2	2	0	0	0	0	0	0	1	14	14
Phillips.....	2	13	14	13	11	5	2	1	3	1	1	0	0	1	67	67

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[illegible]

TABLE XXI.—MEASLES, 1919—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.	En- demic index.
Rush.....	0	3	2	1	0	0	0	0	0	0	0	0	0	0	6	13
Russell.....	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	46
Saline.....	1	0	1	0	1	1	0	0	0	0	0	0	0	0	5	239
Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sedgwick, except Wichita.....	2	10	5	2	2	1	0	3	0	0	0	0	0	0	5	48
Seward.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	346
Shawnee, except Topeka.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Sheridan.....	5	5	8	0	1	0	0	0	1	0	0	0	0	0	5	54
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	639
Smith.....	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	35
Stafford.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	113
Stevens.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	21
Sumner.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Thomas.....	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	2
Trego.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	315
Wabaunsee.....	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Wallace.....	1	4	6	7	1	3	1	3	0	0	0	0	0	0	3	17
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	116
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wilson.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Woodson.....	0	1	0	0	1	0	1	0	0	0	0	0	0	0	3	5
Wyandotte, except Kansas City.....	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	176
.....	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3	66
.....	5	45	40	5	4	3	3	3	2	1	0	0	0	16	127	16
Totals.....	50	254	285	181	83	56	20	29	10	8	3	4	2	63	998	10.510

MEASLES—Continued.

TABLE XXII.—Cases reported from counties and first-class cities, by months, during 1918.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Cases per 1,000 popula- tion.
Allen.....	8	8	7	3	8	2	0	0	0	0	0	0	37	1.4
Anderson.....	7	12	4	1	2	3	0	0	0	0	0	0	29	2.4
Atchison, except Atchison city.....	3	7	8	5	0	0	0	0	0	0	0	0	23	1.9
Barber.....	4	0	4	15	14	2	0	0	0	0	0	0	39	2.6
Barton.....	4	0	1	1	0	0	0	0	0	0	0	0	6	0.7
Bourbon, except Fort Scott.....	15	14	3	1	4	1	0	0	0	2	0	0	40	2.2
Brown.....	81	22	6	9	2	0	0	0	0	0	0	0	125	9.7
Butler.....	26	10	28	3	16	0	0	0	0	0	0	0	64	5.2
Chase.....	6	11	4	22	23	5	0	0	0	0	0	0	64	3.1
Chautauqua.....	44	27	89	134	11	11	0	0	3	1	0	0	332	7.0
Cherokee.....	10	22	20	5	45	3	1	0	0	0	0	2	74	11.2
Cheyenne.....	2	5	0	16	10	12	0	0	0	0	0	0	80	7.4
Clark.....	5	12	8	21	0	3	1	0	0	8	1	2	71	2.7
Clay.....	0	0	0	0	4	0	0	0	0	0	0	0	0	0.0
Cloud.....	2	9	7	5	21	2	0	0	0	0	0	0	29	5.8
Coffey.....	14	20	16	33	27	8	2	0	0	0	1	19	108	7.1
Comanche.....	55	69	15	4	17	33	2	0	0	0	2	0	236	13.2
Cowley.....	22	1	1	0	0	0	1	0	0	0	1	0	47	3.1
Crawford, except Pittsburg.....	1	1	0	0	0	1	0	0	0	0	0	0	3	0.5
Decatur.....	68	28	34	51	79	1	1	0	0	0	0	0	268	8.1
Dickinson.....	21	23	22	16	35	7	0	0	0	0	0	1	127	3.0
Doniphan.....	12	58	27	20	4	1	0	0	0	0	1	0	123	6.8
Douglas.....	0	2	0	0	0	1	0	0	0	0	0	0	3	0.3
Edwards.....	64	75	18	5	2	1	0	0	0	1	0	0	168	6.4
Elk.....	12	17	2	30	6	17	0	0	0	0	0	0	84	5.0
Ellis.....	39	23	8	4	1	0	1	0	0	1	0	2	79	3.1
Ellsworth.....	0	0	0	0	0	1	0	0	0	0	0	0	1	0.1
Finney.....	6	14	6	118	21	0	0	0	0	0	0	0	165	16.1
Ford.....	4	8	14	2	3	2	0	0	0	0	0	0	33	2.4
Franklin.....	8	22	18	15	4	2	0	0	0	1	0	0	70	6.9
Geary.....	17	90	24	40	3	0	0	0	0	0	0	0	174	23.5
Gove.....	18	39	32	8	12	9	0	0	0	0	2	1	121	8.5
Graham.....	148	1	2	0	0	0	0	0	0	2	0	0	153	6.6
Grant.....	63	35	32	14	6	2	0	0	2	2	7	14	177	13.8
	6	10	0	30	0	0	0	0	0	0	0	0	46	10.0
	8	5	0	0	0	0	0	0	0	0	0	0	13	1.8
	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

TABLE XXII.—MEASLES, 1918—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Cases per 1,000 popula- tion.
Gray.....	15	0	4	1	7	2	0	0	0	0	0	0	29	2.6
Greeley.....	0	1	0	0	0	0	0	0	0	0	0	0	1	0.9
Greenwood.....	9	18	18	59	27	0	0	1	0	1	0	0	133	8.9
Hamilton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harper.....	10	2	0	17	9	3	1	0	0	0	0	3	45	3.5
Harvey.....	1	4	1	19	6	1	0	0	0	0	0	0	32	1.7
Haskell.....	0	0	0	2	0	1	1	0	0	0	0	0	9	5.3
Hodgeman.....	2	1	0	0	0	0	0	0	0	0	0	1	4	1.1
Jackson.....	8	7	0	18	0	1	0	0	0	0	0	0	34	2.3
Jefferson.....	11	6	23	42	35	5	0	0	0	0	0	0	122	8.1
Jewell.....	30	11	15	4	5	10	2	0	0	1	0	0	78	4.9
Johnson.....	5	23	4	18	3	1	1	0	0	0	0	0	55	3.2
Kearny.....	13	18	22	5	3	0	0	0	0	0	0	0	61	28.3
Kingman.....	16	0	9	1	10	0	0	0	0	1	0	0	37	3.3
Kiowa.....	1	0	1	0	10	29	5	0	0	0	0	0	46	7.3
Labette, except.....	7	2	2	15	46	21	0	3	0	3	0	0	99	5.5
Parsons.....	3	11	4	5	8	1	0	0	0	0	0	0	27	1.6
Lane.....	2	0	0	0	0	0	0	0	0	0	0	0	2	0.8
Leavenworth, except.....	6	70	7	40	19	0	3	2	0	1	0	0	153	7.9
Leavenworth city.....	23	6	46	83	16	5	0	0	0	1	0	0	175	8.0
Lincoln.....	27	11	51	22	4	0	0	0	1	0	0	0	116	11.6
Linn.....	40	12	13	15	7	1	1	0	0	0	0	1	90	6.0
Logan.....	0	2	6	0	0	0	0	0	0	0	0	0	8	2.3
Lyon.....	42	89	36	0	2	1	1	0	1	0	0	0	172	6.6
Marion.....	24	34	37	84	31	6	0	0	0	0	0	0	218	10.1
Marshall.....	7	4	0	3	23	6	0	1	0	0	6	1	68	3.1
McPherson.....	7	8	17	8	4	12	7	0	0	17	0	0	64	2.9
Meade.....	10	0	0	0	0	0	0	0	0	0	0	0	10	1.7
Miami.....	21	25	48	26	0	0	0	1	0	0	0	0	128	6.9
Mitchell.....	23	50	54	36	12	3	0	0	0	0	0	0	197	14.1
Montgomery, except.....	43	73	35	9	11	7	1	0	0	1	0	0	178	5.1
Codyville.....	88	71	25	4	9	1	0	0	0	1	1	0	200	14.8
Morris.....	5	7	1	7	2	3	0	0	0	0	0	0	22	1.8
Morton.....	1	0	3	2	9	0	0	0	0	0	0	0	18	7.2
Nemaha.....	2	0	0	1	4	0	0	0	0	0	2	0	9	0.5
Neosho.....	19	111	12	89	104	9	1	0	0	0	1	0	348	14.6
Ness.....	1	0	0	3	40	3	0	0	0	0	0	0	47	6.7
Norton.....	3	1	0	5	0	1	0	0	0	0	0	0	10	0.9
Osage.....	10	14	9	13	2	0	1	0	0	0	0	0	50	2.4

Osborne.....	44	27	23	70	81	445	57	21	32	55	46	93	10,510	6.1
Ottawa.....	3	61	9	9	9	1	1	0	1	0	0	0	197	15.4
Pawnee.....	2	6	4	0	0	0	1	1	1	0	0	0	95	8.8
Phillips.....	22	0	4	15	0	0	0	0	0	0	0	1	14	1.5
Pottawatomie.....	34	17	1	3	16	0	0	0	1	0	0	0	67	6.3
Pratt.....	2	2	6	8	2	2	0	0	0	0	1	8	68	4.4
Rawlins.....	3	4	1	0	0	0	0	0	1	0	2	0	18	1.5
Reno, except.....	2	0	6	0	0	1	0	0	0	0	0	0	9	1.4
Hutchinson.....	27	24	16	19	1	3	0	0	0	0	0	0	17	0.8
Republic.....	18	7	7	0	3	5	0	0	0	0	1	3	101	4.3
Rice.....	8	29	5	72	56	10	0	0	0	0	1	5	46	2.9
Riley.....	336	184	63	42	9	0	0	0	0	0	0	0	180	12.9
Rooks.....	9	2	8	4	1	0	0	1	3	5	14	19	676	38.2
Rush.....	2	3	1	0	9	0	0	0	0	0	0	0	24	2.4
Russell.....	6	16	0	7	4	0	0	0	0	0	0	0	10	1.2
Saline.....	90	162	49	87	12	5	0	0	0	0	0	1	47	4.2
Scott.....	1	0	0	0	32	9	1	0	0	0	0	0	430	18.1
Sedgwick, except.....	9	3	2	0	0	0	0	0	0	0	0	0	1	0.3
Wichita.....	27	24	122	11	20	2	1	0	0	0	0	0	48	2.5
Seward.....	4	7	16	44	33	15	0	0	0	0	0	2	346	5.5
Shawnee, except.....	12	0	3	1	2	0	0	0	0	0	0	0	73	12.1
Topeka.....	123	48	17	35	28	12	6	6	0	0	0	0	19	0.9
Sheridan.....	5	2	8	1	10	7	0	0	0	0	0	0	277	6.8
Sherman.....	5	0	1	1	0	0	0	0	0	0	0	0	35	6.6
Smith.....	23	5	16	86	37	11	0	0	0	0	0	0	7	1.5
Stafford.....	1	1	4	4	10	0	0	0	0	0	0	0	128	8.5
Stanton.....	0	0	0	0	1	0	1	0	0	0	0	0	21	1.9
Stevens.....	0	1	0	0	0	0	0	0	0	0	0	0	1	1.0
Sumner.....	39	19	11	37	48	16	0	0	0	0	0	0	2	0.7
Thomas.....	1	0	0	3	0	0	0	0	1	0	0	0	221	8.4
Trego.....	0	1	0	0	0	0	0	0	0	0	0	0	5	1.0
Wabaunsee.....	2	90	10	23	2	1	4	0	0	0	0	0	4	0.6
Wallace.....	0	0	0	0	12	10	0	0	0	0	0	0	151	13.2
Washington.....	8	6	1	0	1	1	0	0	0	0	0	0	2	0.9
Wichita.....	0	0	0	1	8	3	0	0	0	0	0	0	27	1.4
Wilson.....	31	10	34	23	4	0	0	0	0	0	0	0	6	3.3
Woodson.....	5	2	5	14	61	16	0	0	0	1	0	0	176	8.5
Wyandotte, except.....	2	1	1	5	39	1	0	0	0	0	0	0	66	7.2
Kansas City.....	79	121	63	133	7	0	0	0	0	0	0	0	16	0.9
Totals.....	2,373	2,282	1,475	2,130	1,501	445	57	21	32	55	46	93	10,510	6.1

MEASLES—Continued.

TABLE XXIII.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	0	0	1	0	0	0	0	0	0	0	1	2
Anderson.....	1	0	0	0	0	0	0	0	0	0	0	0	1
Atchison, except Atchison city.....	0	0	0	1	0	0	0	0	0	0	0	0	0
Barber.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Barton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except Fort Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown.....	0	0	0	1	2	5	4	1	0	0	0	0	8
Butler.....	2	9	1	3	3	3	1	0	4	2	4	4	30
Chase.....	0	0	1	0	0	0	0	0	0	0	0	0	1
Chautauqua.....	0	0	2	0	4	0	0	0	0	0	0	0	6
Cherokee.....	0	0	0	22	0	1	0	0	0	1	0	0	29
Cheyenne.....	0	0	1	6	0	0	0	0	1	0	0	0	8
Clark.....	0	0	0	0	0	0	0	0	0	0	0	0	1
Clay.....	1	5	10	0	0	0	0	0	1	0	0	0	17
Cloud.....	2	4	15	7	0	0	0	0	1	0	0	0	25
Coffey.....	0	0	3	0	0	0	0	0	0	0	0	0	3
Comanche.....	0	0	0	1	0	0	0	0	0	0	0	0	1
Cowley.....	1	2	9	10	4	1	0	0	0	0	0	0	25
Crawford, except Pittsburg.....	1	0	0	0	0	0	0	0	0	0	0	0	1
Pittsburg.....	1	0	0	0	0	0	0	0	0	0	0	0	1
Decatur.....	0	0	1	0	0	1	0	0	1	0	0	0	3
Dickinson.....	0	0	0	0	1	0	0	0	0	0	0	0	1
Doniphan.....	0	0	1	0	1	0	0	0	0	0	0	0	2
Douglas.....	0	0	1	0	1	0	0	0	0	0	0	0	3
Edwards.....	10	15	10	0	1	1	0	0	0	1	0	1	31
Elk.....	0	0	0	1	0	0	0	0	0	0	0	0	1
Ellis.....	1	0	0	0	0	18	0	0	0	1	0	0	24
Ellsworth.....	1	0	0	1	0	0	0	0	0	0	0	0	2
Finney.....	0	0	6	1	1	0	0	0	1	0	0	1	9
Ford.....	1	0	12	6	0	0	1	0	2	1	0	1	25
Franklin.....	0	2	1	0	0	0	0	0	0	0	0	0	3
Geary.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham.....	0	0	1	0	0	0	0	0	0	0	0	1	2
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	1	8	0	2	0	1	0	0	0	0	0	7
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton.....	0	1	0	0	0	0	1	0	1	2	0	3	6

TABLE XXIII.—MEASLES, 1919—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Saline.....	1	0	0	1	1	0	0	0	0	1	1	0	5
Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	0	0	0	0	0	0	3	2	0	5
Wichita.....	6	5	1	2	4	3	0	0	0	0	1	0	24
Seward.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except	0	0	4	0	0	0	0	0	0	0	1	0	5
Topeka.....	2	0	1	4	2	1	0	0	1	2	1	7	21
Sheridan.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Sherman.....	0	0	1	0	1	0	0	0	0	0	0	0	2
Smith.....	1	0	0	0	0	0	0	0	0	0	0	0	1
Stafford.....	0	0	0	1	0	0	0	0	0	0	0	0	1
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	0	1	0	0	0	0	0	0	0	0	0	1
Sumner.....	0	0	0	2	0	0	3	0	0	0	0	0	5
Thomas.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee.....	0	0	2	0	0	0	0	0	0	0	1	0	3
Wallace.....	0	1	23	1	0	0	0	0	0	0	0	1	26
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	1	0	0	0	0	0	0	0	0	0	0	0	0
Woodson.....	0	0	1	0	0	0	0	0	1	0	0	0	3
Wyandotte, except	0	2	0	0	0	0	0	0	0	0	0	0	2
Kansas City.....	0	2	19	33	17	30	4	2	0	3	10	7	127
Totals.....	59	110	233	189	92	73	48	6	17	26	45	100	998

MEASLES--Continued.

TABLE XXIV.—Cases and deaths reported from 1914 to 1919.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Allen.....	267	2	10	2	22	0	382	4	37	3	2	0
Anderson.....	13	1	8	0	53	0	149	1	29	0	1	0
Atchison, except Atchison city.....	1	0	3	0	167	0	58	1	23	4	0	0
Barber.....	8	1	5	0	201	1	39	1	39	1	3	0
Barton.....	0	0	5	0	6	0	2	0	6	2	0	0
Bourbon.....	4	0	14	0	125	1	274	0	40	0	1	0
Bourbon, except.....	2	0	26	1	167	0	79	0	125	3	0	0
Fort Scott.....	5	0	294	0	101	1	41	0	64	9	8	0
Brown.....	6	1	25	1	131	2	285	10	64	0	30	1
Butler.....	72	1	393	2	312	0	647	12	332	18	29	0
Chase.....	13	0	23	0	6	0	214	1	74	0	1	0
Chautauqua.....	5	0	2	0	36	0	106	3	80	3	31	0
Cherokee.....	181	5	17	2	436	6	233	4	71	5	7	0
Cheyenne.....	0	0	24	0	30	1	14	1	0	0	1	0
Clark.....	15	1	5	0	44	0	250	2	29	0	7	0
Clay.....	12	1	3	0	169	2	60	0	108	1	25	1
Cloud.....	28	0	74	1	27	0	394	2	236	2	21	0
Coffey.....	4	0	23	0	40	0	248	1	47	3	2	0
Comanche.....	15	0	0	0	56	0	68	1	3	1	3	0
Cowley.....	42	0	226	4	192	1	387	3	263	5	32	1
Crawford, except Pittsburg.....	42	1	60	4	487	13	52	0	127	2	3	0
Decatur.....	89	0	41	1	51	2	23	0	123	4	4	0
Dickinson.....	13	0	10	0	46	2	470	1	3	0	0	0
Doniphan.....	15	0	4	0	56	3	23	8	168	1	2	0
Douglas.....	3	0	74	0	313	4	174	4	84	3	3	0
Edwards.....	205	2	29	0	67	3	225	2	79	0	31	0
Elk.....	2	0	0	0	4	0	70	3	1	0	0	0
Ellis.....	8	0	6	0	47	1	115	1	165	2	0	0
Ellsworth.....	0	0	22	2	31	0	190	4	33	0	3	1
Finney.....	2	0	37	0	283	5	76	0	70	1	24	0
Ford.....	0	0	3	0	142	0	12	0	174	2	1	0
Franklin.....	7	1	3	0	227	4	482	4	121	1	9	0
Geary.....	33	0	6	0	82	0	43	0	153	3	25	1
Gove.....	152	2	5	0	21	0	516	44	177	68	0	0
Graham.....	0	0	3	0	81	0	135	1	46	0	0	0
Grant.....	3	0	6	1	7	2	13	3	13	0	2	0
Gray.....	1	0	0	0	6	0	3	0	0	0	0	0
	8	0	0	0	350	2	33	0	29	1	7	0

TABLE XXIV.—MEASLES, 1914 TO 1919—CONCLUDED.

COUNTIES AND CITIES.	1914.		1915.		1916.		1917.		1918.		1919.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Greeley.....	0	0	0	0	6	0	4	0	1	0	0	0
Greenwood.....	180	0	21	0	34	1	156	3	133	4	6	0
Hamilton.....	0	0	0	1	0	0	160	1	0	0	2	0
Harper.....	50	0	4	0	50	0	289	0	45	1	7	0
Harvey.....	9	0	40	1	235	2	154	2	32	4	1	0
Haskell.....	0	0	0	1	66	0	11	1	9	1	0	0
Hodgeman.....	0	1	6	0	28	2	61	1	4	0	0	0
Jackson.....	10	1	32	0	242	2	418	3	34	0	0	0
Jefferson.....	11	0	10	0	101	1	106	6	122	2	7	0
Jewell.....	8	0	208	0	9	0	633	7	73	1	6	0
Johnson.....	32	1	12	0	123	1	198	1	55	0	31	0
Kearny.....	0	0	3	0	16	0	5	1	61	2	0	0
Kingman.....	102	2	6	0	32	0	177	1	37	2	31	1
Kiowa.....	0	0	9	0	103	0	222	1	46	0	6	0
Labette, except Parsons.....	32	7	9	2	121	3	53	2	99	2	37	0
Lane.....	36	0	146	1	293	0	57	1	27	4	4	0
Lans.....	0	0	0	0	5	0	125	3	2	0	0	0
Leavenworth, except Leavenworth city.....	23	0	3	0	96	0	73	2	153	4	3	1
Lincoln.....	253	3	6	0	37	0	260	1	175	3	2	0
Linn.....	39	0	123	0	172	4	26	0	116	2	13	0
Logan.....	23	0	53	0	72	2	59	2	90	2	35	1
Logan.....	0	0	0	0	1	0	50	0	8	0	0	0
Lyon.....	13	0	433	5	19	0	282	0	172	2	2	0
Marion.....	2	0	136	2	169	0	133	0	213	5	9	0
Marshall.....	5	0	20	0	166	4	359	3	68	4	7	0
McPherson.....	23	0	8	0	116	2	203	1	64	1	0	0
Meade.....	5	0	31	0	7	0	81	2	10	0	0	0
Miami.....	42	0	9	1	339	2	32	1	128	4	6	0
Mitchell.....	11	0	256	2	43	1	24	0	197	3	2	0
Montgomery, except Coffeyville.....	273	14	7	0	154	3	475	7	178	2	27	1
Morris.....	313	6	8	0	99	2	105	0	200	3	53	1
Morton.....	19	0	14	0	22	0	98	1	22	1	1	0
Nemaha.....	0	0	0	1	3	0	81	0	13	1	0	0
Neosho.....	10	0	19	0	126	3	327	7	348	3	9	1
News.....	110	0	49	1	373	4	170	1	47	1	25	0
Norton.....	0	0	1	0	132	3	19	2	10	0	0	0
Osage.....	2	0	41	0	237	3	16	0	50	1	3	0
Osborne.....	11	0	75	0	151	0	455	1	197	2	0	0
Ottawa.....	0	0	121	1	14	0	123	0	8	1	0	0
Ottawa.....	15	0	209	0	164	0	31	0	95	0	8	0

Greenwood.....	13	121	235	238	228	200	181	187	120	70	59	55	24	298	2,029
Hamilton.....	3	13	17	13	20	13	18	18	13	12	3	3	5	6	147
Harper.....	10	80	101	151	195	188	126	115	108	55	45	46	19	142	1,331
Harvey.....	2	45	68	60	72	53	58	49	29	84	14	17	8	103	612
Haskell.....	0	1	1	8	5	0	2	1	1	0	1	1	0	141	157
Hodgeman.....	1	14	13	20	15	11	10	9	10	3	3	2	0	28	146
Jackson.....	11	50	125	121	150	100	89	59	78	47	21	26	15	147	1,039
Jefferson.....	8	74	143	298	155	83	85	57	53	63	54	40	24	182	519
Jewell.....	4	61	113	132	126	79	79	66	58	32	26	32	19	218	1,062
Johnson.....	2	41	113	188	177	86	65	66	58	32	25	28	12	327	1,213
Kearny.....	2	24	34	32	29	26	27	25	12	14	6	11	0	19	260
Kingman.....	7	60	155	181	198	111	96	84	81	62	22	28	20	246	1,351
Kiowa.....	13	73	124	119	93	53	89	85	44	32	9	9	11	44	798
Labette, except.....	1	13	34	53	60	36	28	25	34	21	10	17	7	224	563
Parsons.....	3	12	19	19	15	13	14	27	13	13	9	3	1	939	1,105
Lane.....	0	17	16	26	19	15	4	5	9	6	4	4	2	14	141
Leavenworth, except.....	5	34	113	117	62	72	60	45	42	27	15	29	10	50	681
Leavenworth city.....	2	87	91	91	56	70	44	30	31	22	17	22	9	54	576
Lincoln.....	12	79	122	133	172	86	99	86	64	39	30	17	28	93	1,060
Linn.....	10	62	133	132	154	93	77	77	67	44	31	27	16	9	932
Logan.....	1	10	19	12	14	16	13	8	9	6	3	3	1	3	113
Lyon.....	0	23	53	57	102	94	70	73	32	11	27	10	7	393	943
Marion.....	6	118	238	269	296	233	208	141	106	89	53	43	24	152	1,976
Marshall.....	22	115	234	231	202	183	159	175	126	95	42	53	28	196	1,866
McPherson.....	0	1	0	1	4	1	1	0	2	0	0	1	0	1,977	1,933
Meade.....	0	11	26	36	37	23	23	17	18	7	5	7	2	59	276
Miami.....	8	112	171	202	162	134	100	97	105	65	54	43	18	222	1,494
Mitchell.....	7	52	76	73	98	74	63	65	29	32	17	13	7	801	1,422
Montgomery, except.....	13	250	419	432	890	326	324	361	219	149	79	87	28	382	3,465
Coffeyville.....	7	78	141	131	96	104	125	122	106	50	40	28	13	26	1,067
Morris.....	2	8	25	32	23	31	30	12	18	10	7	7	4	23	238
Morton.....	6	38	59	55	54	52	37	37	28	33	13	12	0	156	570
Nemaha.....	5	42	73	92	93	57	60	66	36	31	16	10	8	32	611
Neosho.....	5	26	46	71	73	27	22	16	27	12	14	12	8	1,195	1,554
Neos.....	7	35	79	69	55	31	44	44	28	16	17	9	7	15	462
Norton.....	9	65	77	111	82	59	56	53	39	32	7	11	9	17	627
Osage.....	6	39	142	158	165	139	121	108	96	53	36	42	24	39	1,213
Osborne.....	1	60	97	101	146	121	78	109	74	54	27	27	20	54	969
Ottawa.....	6	57	97	84	124	88	85	84	55	44	32	26	17	112	901
Pawnee.....	6	48	77	84	81	66	65	63	43	20	23	16	2	9	603
Phillips.....	16	31	150	155	153	126	87	83	74	60	31	33	11	97	1,157
Pottawatomie.....	4	91	137	215	254	123	77	93	69	50	30	29	16	255	1,448
Pratt.....	4	90	156	130	123	89	143	107	87	40	27	23	13	71	1,102
Rawlins.....	0	1	3	3	8	5	8	0	5	1	0	0	0	632	711
Reno, except.....	7	57	137	124	145	105	93	81	56	36	26	34	5	310	1,216
Hutchinson.....	7	99	146	129	217	184	187	165	111	54	37	30	25	1,532	2,923
Republic.....	17	85	141	172	203	91	104	80	71	50	25	32	16	1,302	1,389
Rice.....	9	113	223	202	263	176	167	165	105	37	54	38	27	414	2,052
Riley.....	16	105	192	150	133	159	145	97	63	53	25	27	14	879	1,563
Rooks.....	1	12	23	40	37	21	20	14	22	9	6	3	3	65	286

TABLE XXV.—INFLUENZA, 1918—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 60.	60 and over.	Not stated.	Total.
Rush.....	9	53	98	90	107	73	58	51	46	26	16	10	12	118	767
Russell.....	5	82	188	148	96	69	71	67	53	41	23	19	14	98	924
Saline.....	0	9	16	33	31	10	12	15	13	10	4	4	0	1,180	1,340
Scott.....	1	13	16	9	24	9	10	13	8	7	2	2	2	11	127
Sedgwick, except.....	3	37	83	82	82	53	48	50	34	19	12	17	15	103	633
Wichita.....	33	313	630	558	469	491	682	596	429	271	156	130	74	337	5,169
Seward.....	1	8	17	15	13	18	7	9	3	9	4	5	3	670	788
Shawnee, except.....	2	29	70	77	53	51	44	39	33	31	15	11	7	164	626
Topeka.....	37	322	522	417	412	393	439	431	281	201	125	124	40	175	3,919
Sheridan.....	1	6	14	17	24	20	20	15	10	3	2	2	2	1	137
Sherman.....	3	40	70	48	47	48	56	50	36	22	11	9	5	117	567
Smith.....	9	96	147	175	199	127	121	101	94	63	26	23	14	52	1,257
Stafford.....	10	88	120	147	125	78	93	82	53	45	13	23	10	15	1,902
Stanton.....	1	2	4	2	0	0	1	2	1	1	2	0	0	0	15
Stevens.....	7	47	75	57	59	51	69	40	21	16	7	7	1	1	459
Sumner.....	17	190	365	306	405	229	251	244	201	129	70	80	37	2,343	4,848
Thomas.....	0	40	66	67	63	63	31	36	26	15	14	17	6	25	450
Trego.....	0	1	0	4	2	0	0	0	0	0	0	0	0	503	510
Wabaunsee.....	5	32	68	67	55	54	32	47	25	23	5	11	11	101	535
Wallace.....	2	10	21	27	19	12	14	6	6	2	2	2	0	67	190
Washington.....	1	9	18	24	50	32	17	23	10	17	11	12	7	7	238
Wichita.....	0	6	9	7	5	8	8	5	3	3	1	0	0	0	55
Wilson.....	12	106	178	197	199	122	100	89	92	60	24	27	18	185	1,409
Woodson.....	1	15	43	41	39	29	30	33	17	9	5	6	1	11	280
Wyandotte, except.....	11	56	73	69	72	56	66	61	47	22	20	20	8	117	698
Kansas City.....	59	559	846	584	557	653	734	646	477	323	206	171	110	2,199	8,134
Totals.....	777	12,523	13,303	13,385	13,477	10,465	10,325	9,433	7,161	4,633	2,864	2,715	1,413	86,244	133,773

INFLUENZA--Continued.

TABLE XXVI.--Cases reported from counties and first-class cities during 1919, arranged by ages.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.
Allen.....	0	2	3	5	19	4	5	4	2	3	2	1	0	21	71
Anderson.....	0	13	21	24	7	10	11	15	10	11	4	3	4	3	136
Atchison, except Atchison city.....	1	9	31	32	13	12	5	16	8	14	2	1	1	184	290
Barber.....	1	5	12	6	3	6	3	5	6	3	1	2	3	109	163
Barton.....	2	20	32	20	16	13	13	17	15	13	3	5	20	32	203
Bourbon, except Fort Scott.....	2	43	63	64	29	47	44	50	31	28	10	15	3	3	449
Brown.....	0	8	16	21	11	2	5	8	4	4	0	2	0	1	84
Butler.....	3	72	106	85	66	3	2	1	4	3	0	0	1	0	27
Chase.....	11	84	126	116	79	78	67	53	48	26	15	20	22	61	690
Chautauqua.....	1	11	26	26	24	13	17	10	13	10	11	3	1	52	213
Cherokee.....	3	8	12	4	3	3	1	3	2	0	0	0	1	2	35
Cheyenne.....	2	40	79	84	62	33	35	40	45	21	11	9	5	63	535
Clark.....	3	11	13	10	19	11	12	2	9	5	1	1	1	15	112
Clay.....	4	25	32	20	17	18	13	9	6	6	8	4	1	4	139
Cloud.....	5	64	139	107	20	28	26	26	17	13	8	15	11	5	263
Coffey.....	2	25	33	26	36	18	60	62	57	45	17	23	11	63	765
Comanche.....	2	14	11	7	12	8	18	15	14	16	8	6	7	8	232
Cowley.....	16	111	243	143	100	109	92	112	62	61	39	37	18	1	85
Crawford, except Pittsburg.....	13	112	214	171	94	83	78	93	97	50	31	29	15	41	1,189
Decatur.....	2	9	11	5	6	11	12	12	14	4	8	5	4	228	1,226
Dickinson.....	3	7	16	23	31	19	6	27	10	9	9	7	2	9	331
Doniphan.....	6	40	59	53	47	40	29	23	28	11	6	22	8	32	173
Douglas.....	10	34	82	103	61	34	30	28	28	12	22	20	14	1	409
Edwards.....	2	20	47	45	48	47	8	15	19	16	4	11	2	7	484
Elk.....	2	9	35	24	25	17	19	16	18	7	9	7	8	120	291
Ellis.....	0	5	17	17	15	18	12	9	6	6	7	6	5	0	316
Ellsworth.....	2	7	6	4	4	4	3	5	1	2	1	3	1	73	123
Finney.....	6	33	62	38	29	16	33	24	29	13	10	9	2	0	116
Ford.....	2	17	52	63	26	14	14	25	13	9	11	3	2	9	304
Franklin.....	20	133	185	167	126	83	107	99	97	44	23	26	16	10	260
Geary.....	3	9	17	18	13	11	9	10	9	7	3	9	1	14	1,141
Graham.....	0	1	3	4	5	3	6	2	4	3	2	3	2	0	133
Grant.....	0	9	6	10	6	4	3	5	1	3	0	3	0	7	33
Gray.....	0	0	1	0	1	0	1	2	1	1	0	0	0	0	57
Greeley.....	5	26	36	43	51	16	11	25	14	13	9	7	4	8	7
Greenwood.....	0	2	0	0	0	0	0	0	0	0	0	0	0	3	263
	3	45	86	84	77	57	59	44	37	29	13	24	14	5	532

TABLE XXVI.—INFLUENZA, 1919—CONTINUED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 59.	60 and over.	Not stated.	Total.
Hamilton.....	5	19	46	23	28	15	15	15	13	11	2	6	3	5	206
Harper.....	4	25	87	32	46	32	24	30	26	18	18	12	4	5	363
Harvey.....	1	22	26	20	26	27	11	23	12	5	0	12	0	16	201
Haskell.....	0	4	4	1	1	2	4	5	4	2	0	1	0	19	47
Hodgeman.....	4	15	21	14	22	8	8	6	7	9	5	5	1	0	125
Jackson.....	3	17	35	43	29	22	13	20	27	17	14	13	14	25	292
Jefferson.....	7	49	78	53	46	34	30	33	39	22	18	14	12	5	440
Jewell.....	3	38	84	73	47	42	34	40	23	21	16	14	8	35	478
Johnson.....	0	4	12	7	7	6	0	2	7	2	3	4	2	23	79
Kearny.....	1	8	18	14	26	13	18	6	7	7	3	4	0	1	126
Kingman.....	5	49	113	98	57	62	51	49	53	38	27	32	10	10	654
Kiowa.....	18	89	157	141	120	74	47	59	68	37	23	25	6	3	862
Labette, except Parsons.....	3	16	32	34	18	16	13	9	15	6	5	15	10	18	210
Lane.....	2	12	23	17	11	16	27	25	19	12	6	6	4	52	232
Leavenworth, except Leavenworth city.....	0	20	35	39	28	23	17	22	12	15	9	5	5	0	230
Lincoln.....	1	13	32	24	7	19	20	9	9	10	2	8	3	1	158
Linn.....	0	18	12	13	9	3	9	5	3	3	2	4	2	12	95
Lyon.....	6	53	85	80	56	28	32	31	34	20	16	19	3	100	563
Logan.....	6	47	96	115	95	50	52	35	49	32	22	23	19	11	652
Lyon.....	0	2	4	1	3	3	2	2	0	1	1	0	0	9	28
Lyons.....	1	4	8	8	4	8	5	6	4	4	1	2	0	17	71
Marion.....	8	88	156	155	120	93	99	73	78	53	35	28	16	75	1,072
Marshall.....	5	48	70	71	54	37	88	35	33	27	11	12	10	45	496
McPherson.....	0	19	54	70	48	25	18	38	18	14	10	10	1	11	336
Meade.....	0	30	33	24	23	13	16	17	16	3	8	1	0	0	184
Miami.....	0	7	19	18	8	6	2	8	6	4	4	1	1	2	86
Mitchell.....	2	36	76	104	102	44	31	32	43	21	15	12	10	226	754
Montgomery, except Coffeyville.....	4	66	104	166	73	63	79	100	65	40	20	15	13	145	953
Morris.....	0	34	64	32	29	22	39	34	28	15	12	7	3	9	328
Morton.....	3	31	53	55	38	17	27	34	25	16	6	12	2	10	329
Morton.....	3	9	6	7	3	4	7	11	2	4	0	0	0	16	72
Nemaha.....	2	22	40	36	24	19	11	24	18	10	6	5	3	19	239
Neosho.....	1	15	33	50	29	27	12	17	16	18	8	13	7	197	443
Ness.....	1	11	26	48	28	16	8	18	14	3	7	3	4	2	189
Norton.....	3	27	42	51	34	20	12	20	16	15	8	4	1	17	270
Osage.....	5	40	70	70	57	29	38	32	39	22	13	10	4	10	439
Osborne.....	3	46	82	75	54	26	29	33	26	18	14	8	4	27	445
Ottawa.....	6	46	94	77	57	28	26	31	27	24	11	19	8	85	539
Pawnee.....	5	39	74	102	77	41	38	50	28	25	18	23	10	8	538
Phillips.....	12	52	71	91	95	52	61	48	34	26	20	22	10	19	613

Pottawatomie	2	16	38	48	24	17	19	13	15	11	4	7	7	10	281
Pratt	2	59	77	58	55	38	48	41	32	28	10	14	4	28	494
Rawlins	5	29	26	15	14	12	15	15	13	4	7	2	4	134	295
Reno, except	4	18	46	34	28	26	27	21	15	5	8	10	2	104	348
Hutchinson	1	24	38	34	41	36	29	26	17	15	11	8	9	505	794
Republic	5	55	104	71	47	37	44	46	34	28	12	12	8	261	764
Rice	11	43	94	71	45	26	40	46	33	19	11	13	6	138	596
Riley	1	19	49	53	39	44	14	15	17	9	8	5	9	102	384
Rooks	0	17	22	40	36	19	11	13	14	23	8	5	1	56	265
Rush	8	60	78	70	51	39	52	49	36	29	18	9	3	2	504
Russell	3	20	24	25	23	16	23	11	9	5	4	2	3	106	274
Saline	1	9	13	10	8	9	16	13	14	6	1	4	1	124	229
Scott	0	2	10	5	10	8	8	10	6	1	0	2	2	0	64
Sedgwick, except	0	3	15	19	8	11	12	11	6	8	6	3	2	24	128
Wichita	18	150	256	187	103	116	181	177	131	72	51	45	18	77	1,577
Seward	1	4	11	4	2	4	2	7	5	2	3	1	0	49	95
Shawnee, except	0	13	28	29	18	18	12	9	5	10	4	2	7	451	606
Topeka	15	155	326	230	124	132	202	184	117	75	52	68	27	128	1,835
Sheridan	3	16	41	33	25	25	27	21	17	10	2	10	2	0	232
Sherman	0	6	7	7	4	2	4	3	4	0	2	2	3	0	44
Smith	7	77	128	139	111	65	59	75	49	41	20	20	17	21	829
Stafford	3	37	53	48	45	30	24	28	24	17	8	9	4	6	341
Stevens	2	12	6	1	5	4	5	4	3	0	0	0	1	1	44
Sumner	12	79	140	124	85	65	69	70	51	41	18	25	22	257	1,058
Thomas	1	8	11	6	8	15	17	17	11	4	2	7	4	14	125
Trego	0	0	0	0	0	1	0	2	0	0	0	0	0	13	16
Wabaunsee	7	28	39	31	28	30	21	24	26	11	11	7	6	51	320
Wallace	1	4	6	1	0	0	0	0	0	0	0	0	0	8	20
Washington	2	10	16	18	10	10	14	14	14	9	5	2	5	8	137
Wichita	0	1	0	5	5	1	4	1	0	0	1	1	0	7	26
Wilson	11	74	124	114	76	89	57	48	32	30	11	9	4	73	702
Woodson	0	7	15	8	14	6	10	11	7	2	3	1	4	1	89
Wyandotte, except	1	15	9	11	5	14	14	3	5	5	1	5	2	29	120
Kansas City	5	68	83	52	44	67	80	77	57	36	21	35	15	140	774
Totals	406	3,024	6,073	5,475	4,050	3,055	3,739	3,199	2,625	1,770	1,076	1,139	640	5,729	41,800

INFLUENZA—Continued.

TABLE XXVII.—Cases reported from counties and first-class cities during October, November and December, 1918.

COUNTIES AND CITIES.	Oct.	Nov.	Dec.	Total.
Allen.....	563	251	454	1,274
Anderson.....	175	19	130	324
Atchison, <i>except</i>	236	185	258	679
Atchison city.....	186	363	281	830
Barber.....	119	206	203	528
Barton.....	426	565	275	1,266
Bourbon, <i>except</i>	182	180	347	659
Fort Scott.....	91	87	62	190
Brown.....	411	312	738	1,461
Butler.....	1,099	1,017	1,432	3,548
Chase.....	832	74	261	1,167
Chautauqua.....	120	67	77	264
Cherokee.....	1,084	1,035	1,111	3,230
Cheyenne.....	29	60	114	203
Clark.....	118	175	138	431
Clay.....	776	263	761	1,800
Cloud.....	455	677	763	1,895
Coffey.....	252	312	107	671
Comanche.....	188	81	57	326
Cowley.....	1,197	1,029	1,493	3,719
Crawford, <i>except</i>	2,715	1,704	959	4,778
Pittsburg.....	409	370	882	1,661
Decatur.....	15	97	147	259
Dickinson.....	268	362	316	947
Doniphan.....	379	423	725	1,527
Douglas.....	820	244	1,016	2,080
Edwards.....	133	133	156	422
Elk.....	170	0	88	258
Ellis.....	1,268	145	63	1,476
Ellsworth.....	215	110	253	478
Finney.....	275	364	225	1,364
Ford.....	467	567	751	1,785
Franklin.....	329	298	933	1,610
Geary.....	492	324	264	1,080
Gove.....	79	180	89	348
Graham.....	151	171	105	427
Grant.....	0	0	22	22
Gray.....	135	121	0	256
Greeley.....	110	120	0	230
Greenwood.....	1,002	530	497	2,029
Hamilton.....	38	72	37	147
Harper.....	255	544	532	1,331
Harvey.....	164	238	210	612
Haskell.....	29	60	68	157
Hodgeman.....	25	87	84	146
Jackson.....	210	442	387	1,039
Jefferson.....	112	264	743	519
Jewell.....	507	186	369	1,062
Johnson.....	283	498	437	1,218
Kearny.....	37	111	112	260
Kingman.....	461	443	447	1,351
Kiowa.....	179	282	337	798
Labette, <i>except</i>	118	249	196	563
Parsons.....	784	59	262	1,105
Lane.....	20	31	90	141
Leavenworth, <i>except</i>	203	216	262	681
Leavenworth city.....	253	192	131	576
Lincoln.....	253	442	365	1,060
Linn.....	228	286	418	932
Logan.....	25	48	45	118
Lyon.....	234	565	144	943
Marion.....	532	366	1,078	1,976
Marshall.....	720	536	610	1,866
McPherson.....	683	594	711	1,988
Meade.....	710	84	82	276
Miami.....	793	387	314	1,494
Mitchell.....	487	470	465	1,422
Montgomery, <i>except</i>	1,142	1,097	1,226	3,465
Conleyville.....	305	323	439	1,067
Morris.....	63	74	101	238
Morton.....	13	469	88	570
Nemaha.....	65	253	293	611
Neosho.....	991	267	296	1,554

TABLE XXVII. Influenza—CONTINUED.

COUNTIES AND CITIES.	Oct.	Nov.	Dec.	Total.
Ness.....	63	159	240	462
Norton.....	78	161	378	627
Osage.....	340	471	407	1,218
Osborne.....	218	513	238	969
Ottawa.....	168	322	411	901
Pawnee.....	87	257	264	608
Phillips.....	271	381	505	1,157
Pottawatomie.....	424	457	567	1,448
Pratt.....	275	341	486	1,102
Rawlins.....	435	234	42	711
Reno, except.....	102	718	396	1,216
Hutchinson.....	677	1,489	757	2,923
Republic.....	263	665	461	1,389
Rice.....	559	706	787	2,052
Riley.....	538	364	666	1,568
Rooks.....	61	143	72	286
Rush.....	448	113	206	767
Russell.....	267	400	257	924
Saline.....	545	575	220	1,340
Scott.....	36	58	83	127
Sedgwick, except.....	238	206	194	638
Wichita.....	2,097	1,367	1,705	5,169
Seward.....	356	338	94	788
Shawnee, except.....	162	134	330	626
Topeka.....	1,562	1,023	1,334	3,919
Sheridan.....	41	63	38	137
Sherman.....	445	28	94	567
Smith.....	316	499	442	1,257
Stafford.....	169	508	225	902
Stanton.....	0	7	8	15
Stevens.....	116	259	84	459
Sumner.....	1,373	1,731	1,344	4,948
Thomas.....	114	92	244	450
Trego.....	333	0	177	510
Wabaunsee.....	96	114	325	535
Wallace.....	32	61	97	190
Washington.....	105	64	69	238
Wichita.....	8	33	19	55
Wilson.....	499	702	208	1,409
Woodson.....	83	74	123	280
Wyandotte, except.....	434	119	145	698
Kansas City.....	5,810	1,170	1,654	8,134
Totals.....	47,882	41,068	44,823	133,773

INFLUENZA—Continued.

TABLE XXVIII.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	4	41	25	0	0	0	0	0	1	0	0	0	71
Anderson.....	36	50	39	8	3	0	0	0	0	0	0	0	136
Atchison, except Atchison city.....	150	39	64	17	0	0	0	0	0	0	0	0	280
Barber.....	50	63	31	12	0	0	0	0	4	3	0	0	163
Barton.....	104	37	50	11	0	0	1	0	0	0	0	0	208
Bourbon, except Fort Scott.....	150	71	131	27	13	0	1	0	34	3	9	10	449
Brown.....	30	0	54	0	0	0	0	0	0	0	0	0	84
Butler.....	27	0	0	0	0	0	0	0	0	0	0	0	27
Brown.....	195	153	188	57	94	0	0	0	0	3	0	0	690
Butler.....	654	189	84	18	17	1	0	0	3	1	3	0	970
Chase.....	100	75	25	18	0	0	0	0	0	0	0	0	218
Chautauqua.....	29	2	3	0	0	0	0	0	1	0	0	0	35
Cherokee.....	440	49	43	1	0	0	0	1	0	3	0	0	535
Cheyenne.....	13	19	79	0	0	0	0	0	0	1	0	0	112
Clark.....	8	26	92	12	0	0	1	0	0	0	0	0	139
Clay.....	152	48	63	2	0	0	0	0	1	2	0	0	268
Cloud.....	157	317	229	59	3	0	0	0	0	0	0	0	765
Coffey.....	119	34	76	0	0	0	2	0	0	1	0	0	232
Comanche.....	18	12	53	2	0	0	0	0	0	0	0	0	85
Cowley.....	371	502	304	5	0	0	0	0	1	2	1	3	1,189
Crawford, except Pittsburg.....	645	303	243	31	1	0	0	0	1	2	0	0	1,226
Decatur.....	202	24	84	19	0	0	0	0	0	0	2	0	331
Dickinson.....	34	0	39	90	14	0	1	0	0	0	0	0	178
Doniphan.....	176	29	182	19	1	0	0	1	0	0	1	0	409
Douglas.....	328	87	21	46	0	0	0	0	1	0	0	1	484
Edwards.....	66	74	129	13	0	0	0	0	1	1	2	5	291
Elk.....	101	16	188	2	0	0	0	0	0	3	0	4	316
Ellis.....	47	56	19	0	0	1	0	0	0	0	0	0	123
Ellsworth.....	49	16	37	4	0	3	4	1	0	0	2	0	116
Finney.....	180	30	86	4	0	0	0	0	2	1	0	1	304
Ford.....	80	156	16	0	0	0	0	0	4	1	0	3	260
Franklin.....	240	304	562	31	0	0	0	0	1	3	0	0	1,141
Geary.....	88	16	27	2	0	0	0	0	0	0	0	0	133
Gove.....	4	20	10	0	0	0	0	0	3	1	0	0	88
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant.....	23	10	6	12	6	0	0	0	0	0	0	0	57
Gray.....	0	0	0	0	0	7	0	0	0	0	0	0	7
Greeley.....	88	7	260	1	0	0	0	0	0	0	0	0	268
Greenwood.....	238	0	0	0	0	0	0	0	0	0	0	0	83
Hamilton.....	77	221	104	10	2	0	0	0	1	0	1	3	582
		3	110	16	0	0	0	0	0	2	0	0	206

TABLE XXVIII.—INFLUENZA, 1919—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Russell.....	53	0	137	84	0	0	0	0	0	0	0	0	274
Saline.....	30	57	134	3	0	0	0	0	0	2	0	1	229
Scott.....	25	27	12	0	0	0	0	0	0	0	0	0	64
Sedgwick, except Wichita.....	27	57	23	10	1	0	0	0	0	0	0	0	123
Wichita.....	551	657	354	1	0	3	0	0	4	5	1	1	1,577
Seward.....	18	20	55	0	0	0	0	0	2	0	0	0	95
Shawnee, except.....	349	31	91	133	0	0	0	0	0	2	0	0	606
Topeka.....	485	618	635	79	0	0	0	0	10	2	1	5	1,835
Sheridan.....	23	2	18	103	80	0	0	0	0	0	6	0	232
Sherman.....	24	0	20	0	0	0	0	0	0	0	0	0	44
Smith.....	296	397	103	32	0	0	0	0	0	1	0	0	829
Stafford.....	13	81	232	13	0	0	0	0	2	0	0	0	341
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	9	0	28	7	0	0	0	0	0	0	0	0	44
Sumner.....	395	157	403	95	1	0	0	0	5	1	1	0	1,058
Thomas.....	49	0	48	24	4	0	0	0	0	0	0	0	125
Trego.....	7	0	7	0	2	0	0	0	0	0	0	0	16
Wabaunsee.....	83	45	150	33	5	0	0	0	0	4	0	0	320
Wallace.....	13	0	7	0	0	0	0	0	0	0	0	0	20
Washington.....	30	72	22	10	0	0	0	0	1	0	0	0	137
Wichita.....	0	0	26	0	0	0	0	0	0	2	0	0	26
Wilson.....	311	94	237	8	0	0	0	0	0	0	1	1	702
Woodson.....	63	11	10	0	0	0	0	0	0	0	0	0	89
Wyandotte, except.....	60	22	23	13	0	0	0	0	0	0	0	0	120
Kansas City.....	263	235	171	81	2	3	0	0	7	0	9	1	774
Totals.....	15,742	10,175	13,127	1,956	364	40	16	6	121	110	76	66	41,800

TUBERCULOSIS—(all forms).

TABLE XXIX.—Cases reported from counties and first-class cities, by months, during 1918.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	0	0	2	4	1	14	1	1	3	1	1	3	31
Anderson.....	1	0	0	1	1	1	1	1	0	1	0	1	16
Atchison, except	0	2	0	1	0	0	1	0	0	1	2	1	8
Atchison city.....	2	3	1	2	1	0	0	2	0	0	1	3	19
Barber.....	0	0	0	0	0	0	0	0	0	0	0	0	5
Barton.....	1	0	0	0	0	0	2	0	0	1	0	0	6
Bourbon, except	0	0	0	0	2	1	0	0	0	0	0	0	3
Fort Scott.....	1	0	1	1	1	1	0	1	3	1	0	0	15
Brown.....	3	4	1	1	2	2	5	2	0	2	0	1	19
Butler.....	0	2	6	4	7	3	0	1	3	14	2	2	45
Chase.....	0	0	1	0	0	3	1	1	0	0	0	1	6
Chautauqua.....	0	2	3	0	0	1	12	0	2	5	0	1	25
Cherokee.....	3	2	1	0	1	6	8	3	2	3	3	4	36
Cheyenne.....	0	1	2	0	0	1	0	0	1	0	0	0	6
Clark.....	0	0	0	1	0	1	1	0	1	0	0	0	3
Clay.....	1	1	2	0	0	2	0	1	1	0	0	0	13
Cloud.....	0	1	0	0	0	0	2	1	0	3	0	1	12
Coffey.....	0	0	2	2	3	4	1	0	2	0	0	0	13
Comanche.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley.....	1	3	3	2	4	8	1	4	0	15	4	9	49
Crawford, except	6	3	4	3	4	10	2	0	1	2	1	4	40
Pittsburg.....	0	0	0	1	0	1	3	0	0	4	0	0	9
Decatur.....	0	0	0	0	2	0	3	0	0	2	0	1	8
Dickinson.....	0	1	0	0	0	2	0	0	0	1	0	0	3
Doniphan.....	2	1	2	3	0	1	0	3	2	1	2	2	13
Douglas.....	3	1	1	4	5	2	1	1	0	0	2	1	13
Edwards.....	0	0	0	0	0	1	3	0	2	0	0	0	24
Elk.....	0	1	1	0	0	1	0	0	1	0	0	0	1
Ellis.....	1	0	2	0	0	0	10	0	0	1	0	0	13
Ellsworth.....	0	2	0	0	0	0	2	0	0	1	0	0	4
Finney.....	0	0	0	0	1	0	0	1	0	1	0	0	3
Ford.....	1	1	2	0	1	0	3	3	3	1	1	4	20
Franklin.....	1	1	0	19	1	1	1	2	0	1	0	1	28
Geary.....	0	0	0	0	0	2	1	1	1	0	1	1	7
Gove.....	0	0	0	0	0	0	1	0	1	0	0	0	1
Graham.....	0	0	0	1	0	0	0	1	0	0	0	0	4
Grant.....	0	0	0	0	0	0	0	0	0	2	0	0	2
Gray.....	0	0	0	2	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	0	0	1	0	0	0	0	0	0	0	0	0
Hamilton.....	0	0	2	1	1	0	1	1	1	6	0	0	15

TABLE XXIX.—TUBERCULOSIS, 1918—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Harper.....	0	1	0	0	0	0	0	0	0	0	0	0	1
Harvey.....	0	0	1	0	1	2	0	1	2	3	1	0	11
Haakell.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	0	0	0	3	0	0	0	0	0	0	0	0
Jackson.....	1	1	4	0	1	0	2	0	0	0	2	0	13
Jefferson.....	0	0	0	0	1	0	0	1	0	0	0	1	3
Jewell.....	1	3	1	0	2	0	0	1	0	0	7	1	18
Johnson.....	1	1	3	5	2	0	15	1	4	1	0	0	33
Kearny.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman.....	0	1	0	0	0	3	1	2	1	0	0	0	8
Kiowa.....	0	1	0	0	0	1	0	0	1	0	1	1	4
Labette, except Parsons.....	1	3	0	1	2	0	15	4	1	0	2	3	30
Lane.....	3	0	2	0	3	1	26	5	1	4	1	1	50
Leavenworth, except Leavenworth city.....	0	0	0	0	1	0	0	0	0	0	0	0	1
Lincoln.....	2	4	3	1	1	2	2	2	0	1	3	2	19
Linn.....	0	1	1	1	5	0	0	0	1	6	0	0	35
Logan.....	2	0	0	0	0	3	4	2	3	1	0	0	10
Lyon.....	0	0	0	0	0	0	1	0	0	0	0	0	9
Marion.....	4	2	2	0	9	3	0	0	2	2	1	2	27
Marshall.....	2	4	0	0	7	4	1	1	5	1	0	1	26
McPherson.....	2	1	0	3	0	0	1	2	0	0	1	0	12
Meade.....	0	0	2	1	0	0	1	4	0	0	0	0	11
Miami.....	0	0	1	4	1	0	0	3	1	1	0	0	4
Mitchell.....	0	0	2	2	0	3	11	0	1	1	0	3	30
Montgomery, except Coffeyville.....	0	6	3	3	5	1	0	4	2	8	0	2	7
Morris.....	3	3	3	3	3	2	11	2	2	5	1	0	55
Morton.....	1	0	0	0	0	0	2	0	1	0	0	1	27
Nemaha.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Necaho.....	2	3	3	0	0	0	0	3	1	0	1	1	16
Ness.....	1	1	0	0	2	7	9	1	2	2	0	2	31
Norton.....	0	1	0	0	0	0	0	0	0	0	0	0	3
Osage.....	2	1	4	3	0	1	1	4	3	0	1	1	21
Osborne.....	0	0	2	16	0	0	2	1	8	2	0	0	26
Ottawa.....	0	0	1	0	0	0	2	1	3	0	0	0	6
Pawnee.....	0	0	0	0	0	0	1	0	0	0	0	0	1
Phillips.....	0	0	0	0	0	0	1	0	0	0	0	0	1
Pottawatomie.....	0	1	2	1	0	3	2	40	2	1	1	1	54
Pratt.....	0	1	2	0	2	0	0	5	0	1	4	2	21
Rawlins.....	0	1	3	0	0	0	0	0	1	0	1	0	6
	0	1	0	0	0	0	0	1	0	0	1	0	3

TUBERCULOSIS—Continued.

TABLE XXX.—Cases reported from counties and first-class cities, by months, during 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Allen.....	1	1	1	2	1	2	1	3	1	4	1	0	18
Anderson.....	0	0	1	1	0	0	0	1	0	0	0	0	3
Atchison, except.....	0	2	0	0	0	0	0	0	0	1	1	1	5
Atchison city.....	0	0	0	0	1	1	1	0	7	0	0	2	10
Barber.....	0	0	0	0	0	0	0	0	0	0	1	0	5
Barton.....	1	1	0	0	1	0	0	0	3	0	3	2	16
Bourbon, except.....	0	2	1	0	1	1	0	1	1	0	0	0	13
Fort Scott.....	0	0	0	0	1	0	7	0	0	2	0	0	8
Brown.....	3	2	1	2	1	0	5	2	5	1	8	3	25
Butler.....	2	3	1	5	0	1	0	3	2	1	2	0	46
Chase.....	1	0	1	2	0	0	7	1	0	0	0	0	5
Chautauqua.....	0	0	1	0	0	0	0	1	0	0	0	0	3
Cherokee.....	1	5	3	4	0	1	2	2	0	4	0	5	40
Cheyenne.....	0	1	0	2	0	1	1	0	1	0	1	0	7
Clark.....	0	0	0	0	2	0	0	0	1	0	0	0	3
Clay.....	1	1	0	0	0	0	1	1	0	1	2	0	7
Cloud.....	0	0	0	1	0	2	0	1	1	0	0	0	5
Coffey.....	2	1	1	2	0	3	0	2	1	0	0	0	12
Comanche.....	0	0	1	0	0	0	0	0	0	0	0	0	0
Cowley.....	1	3	2	4	1	0	2	6	2	2	0	2	34
Crawford, except.....	1	6	5	2	0	17	1	1	1	4	0	2	42
Pittsburg.....	0	1	0	0	0	7	2	0	1	1	1	2	15
Decatur.....	0	0	0	2	0	0	2	0	1	1	0	0	7
Dickinson.....	0	0	1	1	0	0	1	1	2	0	1	0	19
Doniphan.....	1	0	0	0	0	14	1	1	0	3	1	0	11
Douglas.....	2	0	0	1	3	0	0	1	2	2	1	0	21
Edwards.....	0	0	0	0	2	0	1	6	0	0	0	0	9
Elk.....	0	1	0	0	0	0	1	0	1	0	0	0	3
Ellis.....	0	1	0	0	0	0	2	1	0	0	0	0	5
Ellsworth.....	0	0	0	1	2	2	0	1	2	1	0	1	10
Finney.....	0	0	0	2	5	0	0	0	0	0	2	1	11
Ford.....	1	1	1	0	0	0	0	0	0	1	0	0	4
Franklin.....	3	13	0	1	2	0	1	0	1	2	0	1	29
Geary.....	0	0	0	0	0	8	0	1	1	1	0	0	15
Gove.....	0	0	0	0	1	0	0	0	0	1	0	2	4
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant.....	0	0	1	0	1	0	0	0	0	0	0	0	2
Gray.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	1	0	0	1	0	0	0	2
Greenwood.....	0	0	0	0	0	0	1	0	0	0	0	0	1
Hamilton.....	4	0	0	0	2	3	0	1	0	0	1	2	13
	0	0	0	0	1	0	0	0	0	0	0	0	1

TABLE XXX.—TUBERCULOSIS, 1919—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Saline.....	2	0	0	0	0	4	1	0	1	1	0	2	11
Scott.....	0	0	0	0	0	0	0	4	0	1	0	0	5
Sedgwick, except.....	0	0	0	0	1	0	1	0	0	0	0	0	2
Wichita.....	10	6	7	11	7	7	5	7	1	23	3	4	91
Seward.....	0	0	0	0	0	0	0	0	0	1	0	0	1
Shawnee, except.....	0	1	15	0	0	0	0	2	2	0	1	4	25
Topeka.....	5	1	3	4	2	11	26	5	4	14	18	16	109
Sheridan.....	0	0	0	1	1	0	0	2	0	1	1	0	6
Sherman.....	0	0	0	2	0	1	0	2	3	1	0	0	9
Smith.....	0	0	0	0	0	2	1	0	0	1	0	0	4
Stafford.....	0	0	0	0	1	3	1	0	2	0	0	0	7
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	0	0	0	2	0	0	0	0	0	0	0	2
Sumner.....	2	1	1	3	2	1	6	7	1	0	1	2	34
Thomas.....	0	0	0	5	1	1	1	0	0	0	0	0	8
Trego.....	0	0	0	0	0	1	0	0	0	0	0	0	1
Wabaunsee.....	0	0	0	0	0	0	0	0	2	0	0	0	2
Wallace.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita.....	0	0	0	0	1	0	0	0	1	0	0	0	2
Wilson.....	2	0	3	1	2	3	1	2	3	1	0	0	17
Woodson.....	0	0	0	1	0	0	0	0	0	1	0	0	5
Wyandotte, except.....	0	1	1	3	0	0	3	0	0	1	0	0	14
Kansas City.....	15	21	18	11	17	20	15	7	23	17	18	16	198
Totals.....	160	106	100	139	110	174	163	110	125	132	105	108	1,532

OTHER COMMUNICABLE DISEASES.

TABLE XXXI.—Total cases reported from counties and first-class cities during 1918.

COUNTIES AND CITIES.	Pneumonia	Cholera	Infantile paralysis	Malaria	Polio
Allen	26	12	8	14	1
Anderson	11	6	24	25	19
Atchison, except	4	0	26	5	0
Atchison city	5	15	34	5	3
Barber	6	5	0	5	3
Barton	46	15	44	14	11
Bourbon, except	42	2	5	11	3
Fort Scott	15	5	6	17	2
Brown	22	9	32	40	5
Butler	250	8	181	117	10
Chase	13	0	11	13	21
Chautauqua	3	1	18	15	2
Cherokee	61	2	39	14	0
Cheyenne	3	1	9	3	0
Clark	4	6	24	21	7
Clay	3	3	30	1	3
Cloud	19	15	42	24	27
Coffey	3	3	5	12	25
Comanche	10	3	0	13	3
Cowley	92	15	34	65	33
Crawford, except	122	6	15	6	10
Pittsburg	13	11	10	7	5
Decatur	3	1	2	1	2
Dickinson	30	21	11	45	40
Doniphan	74	33	185	16	7
Douglas	11	32	463	74	167
Edwards	3	0	0	29	0
Elk	34	3	24	9	1
Ellis	1	0	36	5	0
Ellsworth	33	42	667	23	59
Finney	25	12	72	24	1
Ford	113	12	160	20	53
Franklin	16	2	0	11	4
Geary	29	23	55	43	64
Gove	0	3	73	15	74
Graham	4	0	12	7	2
Grant	0	0	0	0	0
Gray	10	8	123	17	5
Greeley	0	0	0	0	0
Greenwood	67	5	41	26	10
Hamilton	2	4	22	14	12
Harper	13	1	71	29	27
Harvey	3	10	42	4	6
Haskell	0	0	18	1	1
Hodgeman	2	17	0	0	7
Jackson	2	5	31	19	15
Jefferson	27	0	64	26	10
Jewell	26	7	110	32	9
Johnson	5	3	6	14	0
Kearny	2	5	0	25	14
Kingman	18	1	41	13	18
Kiowa	3	6	53	3	14
Labette, except	4	2	15	17	6
Parsons	5	1	0	5	1
Lane	0	0	2	0	2
Leavenworth, except	50	3	130	23	2
Leavenworth city	35	71	133	4	7
Lincoln	10	16	23	17	11
Linn	15	0	1	4	1
Logan	0	0	10	1	3
Lyon	0	7	7	6	2
Marion	34	37	64	29	47
Marshall	59	3	207	17	55
McPherson	1	17	24	25	4

TABLE XXXI.—OTHER COMMUNICABLE DISEASES, 1918—CONTINUED.

COUNTIES AND CITIES.	Pneumonia.....	Chickenpox.....	German measles.....	Whooping cough...	Mumps.....	Meningitis.....	Infantile paralysis..	Malaria.....	Pellagra.....
Meade.....	9	5	19	2	0	1	0	0	0
Miami.....	31	1	7	3	8	2	0	0	1
Mitchell.....	12	12	9	9	18	1	0	0	0
Montgomery, <i>except</i>	128	30	50	57	21	7	1	1	4
Coffeyville.....	14	12	19	21	29	0	0	2	1
Morris.....	17	2	1	0	0	0	0	0	0
Morton.....	15	0	7	14	0	1	0	0	0
Nemaha.....	15	0	8	3	5	3	0	0	0
Neosho.....	8	22	31	48	16	3	0	1	0
Ness.....	34	4	17	0	2	0	0	0	0
Norton.....	6	9	9	3	1	0	0	0	0
Osage.....	20	1	10	13	32	0	0	0	0
Osborne.....	9	33	7	21	72	1	1	0	0
Ottawa.....	0	16	19	23	2	0	0	0	0
Pawnee.....	30	3	43	10	2	0	0	0	0
Phillips.....	12	5	4	46	0	7	0	0	0
Pottawatomie.....	5	10	12	111	26	7	0	0	0
Pratt.....	2	2	3	10	3	0	1	0	0
Rawlins.....	0	1	5	4	1	0	0	0	0
Reno, <i>except</i>	17	7	11	1	8	0	0	0	0
Hutchinson.....	20	21	34	21	15	0	0	0	3
Republic.....	13	6	29	14	11	0	0	0	0
Rice.....	12	0	75	6	33	2	0	0	0
Riley.....	120	48	347	51	133	12	0	0	0
Rooks.....	0	12	9	5	2	1	0	0	0
Rush.....	8	12	24	3	33	0	0	0	0
Russell.....	7	1	5	6	0	0	0	0	0
Saline.....	3	45	43	20	10	1	1	0	1
Scott.....	1	0	1	2	0	0	0	0	0
Sedgwick, <i>except</i>	12	6	43	3	33	1	0	0	0
Wichita.....	153	99	1,032	153	119	16	0	1	3
Seward.....	0	1	4	15	1	0	0	0	0
Shawnee, <i>except</i>	0	4	20	3	7	0	0	0	2
Topeka.....	14	195	1,394	175	995	4	0	0	1
Sheridan.....	2	55	203	44	13	0	0	0	0
Sherman.....	7	0	2	1	2	0	0	0	0
Smith.....	10	4	23	23	3	0	0	0	0
Stafford.....	7	0	2	3	6	0	0	0	0
Stanton.....	0	0	0	0	0	0	0	0	0
Stevens.....	0	0	6	0	1	0	0	0	0
Sumner.....	143	71	446	43	33	7	2	3	0
Thomas.....	4	0	0	5	0	1	0	0	0
Trego.....	0	2	12	13	0	0	4	0	0
Wabaunsee.....	6	0	20	6	23	0	1	0	0
Wallace.....	0	0	0	14	2	0	0	0	0
Washington.....	1	2	2	2	6	0	0	0	0
Wichita.....	0	0	0	0	0	0	0	0	0
Wilson.....	21	3	43	65	21	2	0	7	0
Woodson.....	2	0	3	25	2	2	0	0	0
Wyandotte, <i>except</i>	31	1	2	2	0	1	0	0	0
Kansas City.....	335	40	23	33	32	30	1	3	1
Totals.....	2,395	1,361	3,454	2,374	2,354	224	13	27	29

OTHER COMMUNICABLE DISEASES—Continued.

TABLE XXXII.—Total cases reported from counties and first-class cities during 1919.

COUNTIES AND CITIES.	Pneumonia.....	Chickenpox.....	German measles.....	Whooping cough...	Mumps.....	Meningitis.....	Infantile paralysis.	Malaria.....	Pellagra.....
Allen.....	7	7	0	20	1	0	1	0	1
Anderson.....	1	11	2	2	3	1	0	0	0
Atchison, except Atchison city.....	8 0	6 17	0 1	0 8	1 0	0 0	0 0	0 0	0 0
Barber.....	1	9	0	0	1	0	0	0	0
Barton.....	10	18	0	2	3	0	0	0	0
Bourbon, except Fort Scott.....	6 3	3 15	0 0	0 3	0 1	1 2	2 1	0 0	0 0
Brown.....	4	2	0	11	5	1	1	0	0
Butler.....	83	79	3	21	69	1	1	1	1
Chase.....	2	33	22	42	0	0	0	0	0
Chautauqua.....	7	4	0	2	2	0	0	0	0
Cherokee.....	15	5	0	16	1	2	1	1	1
Cheyenne.....	3	0	0	15	0	1	0	0	0
Clark.....	4	0	3	0	39	0	0	0	0
Clay.....	0	13	0	1	2	0	1	0	0
Cloud.....	2	15	0	5	0	0	0	0	0
Coffey.....	9	1	0	2	1	0	1	0	0
Comanche.....	4	0	0	0	3	1	0	0	0
Cowley.....	6	51	1	9	40	0	1	0	1
Crawford, except Pittsburg.....	62 7	12 7	1 0	50 3	26 2	2 3	0 0	0 0	0 0
Decatur.....	0	3	0	0	1	0	0	1	0
Dickinson.....	14	4	1	15	2	4	0	0	0
Doniphan.....	5	14	0	4	14	1	0	0	0
Douglas.....	6	28	0	7	33	1	3	0	0
Edwards.....	0	2	0	2	1	0	0	0	0
Elk.....	22	2	1	1	3	0	0	0	0
Ellis.....	2	3	0	0	20	0	0	0	0
Ellsworth.....	1	5	4	0	3	0	1	0	0
Finney.....	2	1	0	0	2	0	0	0	0
Ford.....	33	22	3	21	42	1	0	0	0
Franklin.....	2	5	1	14	2	0	1	0	0
Geary.....	6	12	1	2	17	0	0	0	1
Gove.....	1	1	0	0	0	0	0	0	0
Graham.....	5	5	0	0	0	0	0	0	0
Grant.....	0	0	0	0	0	0	0	0	0
Gray.....	2	3	0	10	1	0	0	0	0
Greeley.....	0	0	0	0	0	0	0	0	0
Greenwood.....	25	17	3	19	44	2	0	0	0
Hamilton.....	3	1	0	1	6	0	1	0	0
Harper.....	5	14	0	31	12	0	0	0	0
Harvey.....	1	7	0	2	31	1	1	0	0
Haskell.....	0	0	0	0	4	0	0	0	0
Hodgeman.....	0	0	0	0	0	0	0	0	0
Jackson.....	0	18	0	10	3	1	0	0	0
Jefferson.....	6	10	0	0	5	1	1	1	0
Jewell.....	1	12	0	46	21	1	0	0	0
Johnson.....	0	6	0	5	0	1	2	0	0
Kearny.....	3	0	0	0	0	1	0	0	0
Kingman.....	9	5	0	7	25	2	2	0	0
Kiowa.....	2	1	0	14	30	0	0	0	0
Labetta, except Parsons.....	0 11	3 26	0 0	7 2	4 21	0 1	1 0	0 0	1 1
Lane.....	0	0	0	0	0	0	0	0	1
Leavenworth, except Leavenworth city.....	5 6	3 41	0 0	3 0	5 7	0 3	2 0	0 0	0 0
Lincoln.....	15	18	1	3	15	0	0	0	0
Linn.....	13	3	0	0	5	0	1	0	0
Logan.....	0	1	0	0	1	0	0	0	0
Lyon.....	0	5	0	7	13	3	0	0	0
Marion.....	20	59	1	19	12	4	1	0	0
Marshall.....	33	34	0	4	19	1	0	0	0
McPherson.....	5	20	0	0	3	0	0	0	1

TABLE XXXII.—OTHER COMMUNICABLE DISEASES, 1919—CONCLUDED.

COUNTIES AND CITIES.	Pneumonia.....	Chickenpox.....	German measles....	Whooping cough...	Mumps.....	Meningitis.....	Infantile paralysis..	Malaria.....	Pellagra.....
Meade.....	4	0	0	1	4	0	0	0	0
Miami.....	17	3	0	4	0	0	0	0	0
Mitchell.....	3	6	0	0	4	0	0	0	0
Montgomery, except Coffeyville.....	47	19	0	4	17	0	1	1	1
Morris.....	8	8	2	5	0	1	0	0	0
Morton.....	2	7	0	0	1	0	0	0	0
Nemaha.....	0	0	0	0	1	0	1	0	0
Nemaha.....	4	14	2	25	9	0	0	0	0
Neosho.....	0	12	0	11	9	0	0	0	0
Ness.....	15	0	0	0	0	0	0	0	0
Norton.....	2	1	0	0	3	0	0	0	1
Osage.....	6	4	0	0	0	1	2	0	1
Osborne.....	3	1	0	0	26	0	0	0	1
Ottawa.....	2	5	0	2	6	1	0	0	0
Pawnee.....	13	24	0	5	7	0	0	0	0
Phillips.....	5	0	0	1	9	4	0	0	0
Pottawatomie.....	1	13	1	13	6	0	0	0	0
Pratt.....	5	19	0	0	2	0	1	0	1
Rawlins.....	7	0	0	0	6	0	0	0	0
Reno, except Hutchinson.....	6	4	0	0	3	0	2	0	0
Republic.....	4	41	2	2	17	0	0	0	0
Rice.....	4	12	0	16	3	1	0	0	0
Rice.....	9	25	0	5	44	0	5	0	0
Riley.....	31	89	2	56	92	3	0	0	1
Rooks.....	1	11	0	0	1	0	0	0	0
Rush.....	9	11	0	0	13	0	0	0	0
Russell.....	4	1	0	0	4	1	0	0	0
Saline.....	4	38	1	5	62	0	2	0	1
Scott.....	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita.....	5	1	0	0	5	0	0	0	0
Wichita.....	30	137	1	48	69	1	1	1	1
Seward.....	0	0	0	6	3	0	2	0	2
Shawnee, except Topeka.....	3	7	1	0	0	0	2	0	1
Topeka.....	10	101	3	69	21	3	5	2	5
Sheridan.....	1	1	0	0	4	0	0	0	0
Sherman.....	8	0	0	8	3	0	0	0	0
Smith.....	5	4	1	21	1	0	0	0	0
Stafford.....	3	0	0	0	5	0	0	0	0
Stanton.....	0	0	0	0	0	0	0	0	0
Stevens.....	0	1	0	0	0	0	0	0	0
Sumner.....	36	42	2	34	45	0	4	0	0
Thomas.....	4	0	0	0	9	0	0	0	0
Trego.....	0	0	0	0	1	0	0	0	0
Wabaunsee.....	1	0	1	0	2	0	0	0	0
Wallace.....	0	0	0	0	0	0	0	0	0
Washington.....	1	0	0	0	2	0	0	0	0
Wichita.....	0	0	0	2	0	0	0	0	0
Wilson.....	20	5	0	0	20	0	1	0	0
Woodson.....	10	2	0	0	16	0	0	0	0
Wyandotte, except Kansas City.....	9	0	0	1	1	0	0	0	0
Totals.....	211	81	2	59	30	8	4	5	0
Totals.....	1,081	1,474	70	866	571	68	61	13	23

DIVISION OF WATER AND SEWAGE.

Annual Report of Engineer, Year Ending June 30, 1919.

To the Members of the Kansas State Board of Health:

GENTLEMEN—The work of this division for the past year has been necessarily confined strictly to that which is prescribed by law, on account of the changing personnel and inability to obtain experienced men in this line of work.

The routine work as required by the water and sewage laws has, however, been kept up to date, and it is hoped that with the return of our chief, Captain Haskins, we will be able to take up more of the research and educational work that has been a feature of this department in the past.

PERSONNEL.

Since July 1, 1918, this office has been in charge of the writer, and the following assistants have been employed for the time indicated:

C. K. Mathews, June 16 to September 7.

G. E. Nettles, June 5 to August 10.

F. N. Raymond, June 20 to September 4.

These men were used only for collection of samples, since they had had no previous experience in sanitary work.

On October 1 the services of W. A. Burton were secured, and he was appointed assistant engineer for one year commencing November 1, 1918.

On April 18, 1919, Lieut. Alfred Wieters returned after spending several months in the army. He is working on a part-time basis at the present time, but will soon be recommended for a regular appointment.

INSPECTIONS.

The following table gives a list of the inspections made by members of this division during the past year, together with the date and a number, which represents the member who made the inspection:

LIST OF INSPECTIONS.

KEY TO INSPECTORS' NUMBERS.

- 1—F. M. Veatch.

2—W. A. Burton.

3—A. H. Wieters.

4—G. E. Nettles.
- 5—F. N. Raymond.

6—C. K. Mathews.

7—E. L. Treece, from the laboratory.

8—C. R. Welch, from the laboratory.

TOWN.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
Abilene.....	5	7- 5-18			5	7- 5-18	5	7- 5-18		
Abilene.....	1	3-16-19			6	8-31-18	6	8-31-18		
Abilene.....					1	3-16-19	1	3-16-19		
Almena.....	5	8-16-18								
Alton.....	6	7-23-18								
Altoona.....	6	8- 5-18								
Altoona.....	1	8- 6-18								
Altoona.....	1	12-17, 18-18								
Altoona.....	2	12-17, 18-18								
Anthony.....	4	7- 8-18	4	7- 8-18	4	7- 8-18				
Anthony.....	1	10- 9-18	1	10- 9-18	1	10- 9-18				
Anthony.....	2	10- 9-18	2	10- 9-18	2	10- 9-18				
Anthony.....	2	5- 8-19	2	5- 8-19	2	5- 8-19				
Argentine.....									a1	9-30-18
Argentine.....									a2	12-16-18
Argonia.....	2	5- 6-19								
Arkansas City.....	5	8-22-18			5	8-22-18				
Arkansas City.....	1	2-25-19			1	2-25-19				
Arma.....	2	2-24-19								
Army City.....	5	7- 4-18	5	7- 4-18						
Army City.....	5	8-14-18	5	8-14-18						
Ashland.....	4	7- 7-18								
Atchison.....	1	9- 7-18			1	9- 7-18			b1	9- 7-18
Atchison.....	1	9-20-18			1	2-18-19			b1	9- 7-18
Atchison.....	1	2-18-19								
Atchison.....	1	3-11-19								
Atchison.....	2	3-11-19								
Atchison.....	1	4-28-19								
Attica.....	3	5-29-19								
Atwood.....	5	7-19-18								
Augusta.....	1	9-18-18	1	9-18-18	6	9- 5-18				
Baldwin.....	2	2- 7-19	2	2- 7-19						
Barnard.....					6	8-30-18				
Barnard.....					2	5-27-19				
Baxter Springs.....	1	10- 3-18	1	10- 3-18						
Baxter Springs.....	1	4- 4-19	1	4- 4-19						
Belle Plaine.....	5	8- 2-18								
Belleville.....	1	12- 2-18	1	12- 2-18	1	12- 2-18				
Belleville.....	3	4-23-19	3	4-23-19	3	4-23-19				
Beloit.....	3	5- 2-19								
Beloit.....	4	7-19-18			4	7-19-18				
Beloit.....	6	8-29-18			6	8-29-18				
Beloit.....	3	5-7, 11-19								
Belvidere.....					5	7-27-18				
Bennington.....	6	7- 6-18								
Blue Rapids.....	6	7-10-18								
Bonner Springs.....	4	7-13-18			4	7-13-18				
Bonner Springs.....	8	7- 9-18			8	7- 9-18				
Bucklin.....	2	4-23-19			2	4-23-19				
Bunkerhill.....	2	1-16-19								
Burden.....	5	8-22-18								
Burlingame.....	2	1- 8-19	2	1- 8-19						
Burlington.....	6	8-14-18	2	2-15-19						
Burlington.....	6	8-19-18								
Burlington.....	2	2-15-19								
Burr Oak.....	2	5-29-19								
Burrton.....	2	5- 2-19								
Caldwell.....	4	7-10-18	4	7-10-18	4	7-10-18				
Caldwell.....	1	5-17-19	1	5-17-19	1	5-17-19				
Caney.....	2	4-10-19								
Cawker City.....	3	5- 2-19								
Canton.....					3	5-28-19				
Cedarvale.....	5	8-30-18			5	8-30-18				
Cedarvale.....	2	4- 9-19			2	4- 9-19				
Cedarvale (proposed).....			1	5- 8-19						

a. Tucker, Mineral Spring.

b. Hecklenhaemper Bros. and F. W. Lincoln.

INSPECTIONS—CONTINUED.

Town.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
Chapman	5	7-5-18								
Chapman	6	8-8-18								
Chanute	1	8-20-18	1	2-14-19	7	8-20-18			c1	5-20-19
Chanute	4	8-1 to 20-18			1	2-14-19			c1	6-3,4-19
Chanute	7	8-1 to 20-18								
Chanute	1	2-14-19								
Chanute	1	6-4-19								
Cherokee	2	2-24-19								
Cherryvale	1	7-11-18	1	9-2-18	2	1-23-19				
Cherryvale	1	8-6-18								
Cherryvale	1	9-2-18								
Cherryvale	2	1-23-19								
Cimarron	2	11-4-18								
Clay Center	2	3-21-19								
Clearwater	3	5-30-19								
Clifton	2	3-20-19								
Clyde	2	3-20-19	2	3-20-19	6	8-28-18				
Clyde					2	3-20-19				
Coffeyville	6	8-1-18	1	1-1-19	1	1-1-19			d1	1-17-19
Coffeyville	1	1-1-19								
Coffeyville	2	6-9-19								
Colby	5	7-17-18								
Colby	2	1-13-19			2	1-13-19				
Coldwater	4	7-8-18								
Colony					2	2-14-19				
Columbus	1	10-3-18	1	10-3-18			1	10-3-18		
Columbus	2	2-24-19	2	2-26-19			2	2-26-19		
Columbus			2	3-4-19			2	3-4-19		
Concordia	6	8-29-18			6	8-29-18				
Concordia	2	3-20-19			2	3-20-19				
Conway Springs	2	5-9-19			2	5-9-19				
Cottonwood Falls	1	3-28-19								
Council Grove	1	10-29-18	1	10-28-19	1	1-9-19				
Council Grove	2	1-9-19	2	1-9-19						
Courtland (proposed)	5	8-15-18								
Delphos	6	7-8-18								
Dighton	2	11-6-18								
Dodge City	3	5-26-19								
Douglas (proposed)			1	3-23-19						
Downs	3	5-2-19	3	5-2-19	3	5-2-19				
El Dorado	5	7-1-18	1	8-18-18						
El Dorado	1	8-18-18			6	9-6-18	6	9-6-18		
El Dorado	2	10-10-18					2	10-11-18		
Ellinwood	2	11-8-18			2	11-8-18				
Ellinwood	6	9-3-18			6	9-3-18				
Ellis	2	1-15-19	2	1-15-19	2	1-15-19				
Ellis	2	6-26-19	2	6-26-19	2	6-26-19				
Ellsworth	2	1-18-19								
Emporia	6	9-6-18			6	9-6-18				
Emporia	2	1-10-19			2	1-10-19				
Enterprise	5	7-5-18								
Esbon	3	4-25-19								
Elkhart	4	7-25-18			4	7-25-18				
Eureka	5	7-26-18	5	7-26-18						
Eureka	2	6-9-19								
Florence	6	7-13-18			5	9-6-18				
Florence	6	9-6-18			1	3-27-19				
Florence	2	2-15-19								
Florence	1	3-27-19								
Fort Scott	1	7-26-18	1	1-26-19	1	1-26-19				
Fort Scott	1	8-24-18								
Fort Scott	1	10-24-19								
Fort Scott	1	1-26-19								
Fort Scott	1	4-29-19								
Fowler	6	7-10-18								
Frankfort	6	7-10-18								
Fredonia	1	8-1-18	2	3-5-19						
Fredonia	2	3-5-19								
Frontenac	2	2-24-19								
Camp Funston	1	9-27-18	1	9-27-18						
Galena	1	8-14-18								

c. Pollution of Neosho river.

d. Refinery wastes.

INSPECTIONS—CONTINUED.

Town.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
Galena	1	1-8-19								
Garden City	2	11-14-18			2	11-14-18				
Garden City	3	6-26-19			3	6-26-19				
Garnett	2	2-13-19	2	2-13-19						
Garrison Crossing					6	8-20-18				
Garrison Crossing					2	12-10-18				
Garrison Crossing					2	3-18-19				
Girard	2	2-24-19	2	2-24-19						
Gould Springs	3	5-31-19								
Glasco	6	7-8-18								
Glen Elder	3	5-2-19								
Goodland	5	7-17-18			5	7-17-18				
Great Bend	2	4-25-19	2	4-25-19	2	4-25-19				
Great Bend	2	11-8-18			2	11-8-18				
Green	3	4-30-19								
Greenleaf	6	7-9-18			6	7-9-18				
Greenleaf	2	5-30-19			2	5-30-19				
Greensburg	4	7-4-18								
Halstead	2	12-13-18	2	12-13-18						
Hanover	2	8-18-19			2	3-18-19				
Harper	3	5-30-19	3	5-30-19	3	5-30-19				
Havensville	6	7-12-18								
Hays City	2	1-15-19	2	1-15-19						
Herington	1	7-6-18								
Herington	1	8-12-18								
Herington	1	10-15-18								
Herington	2	10-15 to 18-19			2	2-5-19				
Herington	2	2-5-19	2	2-5-19	1	10-15-18				
Hiawatha	6	7-18-18	6	7-18-18	6	7-18-18				
Hiawatha	2	10-31-18	2	10-31-18	2	10-31-18				
Hiawatha	2	1-29-19	2	1-29-19	2	1-29-19				
Hiawatha	1	2-18-19	1	2-18-19						
Highland	6	7-19-18								
Highland	1	9-6-18								
Hill City	2	4-4-19								
Hillsboro (Tabor College)			2	2-20-19						
Hoisington	2	11-8-18	2	11-8-18	2	11-8-18				
Hoisington	2	4-25-19	2	4-25-19	2	4-25-19				
Holton	2	10-30-18	2	10-30-18						
Holyrood	4	7-14-18			4	7-14-18				
Holyrood	6	9-3-18			6	9-3-18				
Holyrood	2	5-1-19			2	5-1-19				
Hope	1	7-6-18								
Hope	2	2-5-19								
Horton	1	8-27-18	1	8-27-18	2	10-31-18				
Horton	2	10-31-18	2	10-31-18	2	1-29-19				
Horton	2	1-30-19	2	1-30-19						
Humboldt	1	7-19-18	1	7-29-18						
Humboldt	1	8-5-18								
Hutchinson	6	9-4-18	2	4-24-19	6	9-4-18	6	9-4-18		
Hutchinson	2	4-24-19			2	4-24-19				
Independence	4	8-2-18	2	3-7-19	2	3-7-19	2	1-23-19		
Independence	1	1-1-19					2	3-7-19		
Independence	2	1-23-19								
Independence	2	3-7-19								
Independence	1	5-9-19								
Independence	2	6-9-19								
Iola	6	8-15-18	2	1-24-19						
Iola	6	8-20-18								
Iola	1	10-21-18								
Iola	1	12-18-18								
Iola	2	1-24-19								
Jamestown	6	7-9-18								
Jetmore	3	5-28-19			3	5-28-19				
Junction City	5	7-4-18			5	7-4-18				
Junction City	5	8-14-18			2	4-5-19				
Kanopolis	2	1-17-19								
Kansas City	1	7-25-19								
Kensington	3	4-25-19								
Kingman	4	7-6-18								
Kinsley	4	7-2-18			4	7-2-18				
Kinsley	1	3-21-19			1	3-21-19				
Kiowa	2	5-7-19								
Kirwin	6	8-24-18								
La Crosse	2	11-7-18								
La Cygne	5	7-24-18								
La Cygne	1	11-25-18								
La Cygne	1	1-1-19								

INSPECTIONS—CONTINUED.

Town.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
La Harpe.....	6	8-13-18								
Lansing (State Prison).....	1	7- 9-18								
Lansing (State Prison).....	1	8-19-18								
Lansing (State Prison).....	1	9-25-18								
Larned.....	3	5-27-19								
Lawrence.....	2	11-30-18			2	12-23-18				
Lawrence.....	2	12- 9-18								
Lawrence.....	1	12- 9-18								
Lawrence.....	1	5-25-19								
Leavenworth.....	1	7- 9-18								
Leavenworth.....	1	9- 9-18								
Leavenworth.....	1	10-26-18								
Leavenworth.....	1	1-20-19								
Leavenworth.....	1	2-19-19			1	2-19-19				
Lebanon.....	3	4-24-19								
Liberal.....	2	4-23-19	2	4-23-19	2	4-23-19				
Lincoln.....	2	4- 2-19	2	4- 2-19						
Lindsborg.....	5	7- 3-18								
Lindsborg.....	2	4-30-19								
Little River.....	2	4-30-19								
Logan.....	3	4-26-19								
Lucas.....	2	4- 3-19								
Luray.....	2	4- 3-19								
Lyndon.....	2	2-19-19	2	2-19-19						
Lyons.....	5	7-13-18								
Lyons.....	2	5- 1-19								
Macksville.....	4	7-23-18								
Madison.....	5	7-10-18			5	7-10-18				
Madison.....	2	4-11-19			2	4-11-19				
Manhattan.....	2	12-10-18			2	12-10-18				
Mankato.....	3	4-24-19								
Mankato.....	3	5-29-19								
Marion.....	5	7-11-18								
Marquette.....	5	7- 3-18			5	7- 3-18				
Marquette.....	1	11- 8-18			1	11- 8-18				
Marquette.....	2	4-29-19			2	4-29-19				
Marysville.....	2	3-18-19			6	7-11-18				
Marysville.....					2	3-18-19				
McCracken.....	2	11- 7-18								
McCune.....	2	2-25-19								
McPherson.....	2	12-13-18	2	12-13-18	2	12-13-18				
McPherson.....	2	4-30-19	2	4-30-19	2	4-30-19				
McFarland.....					2	12-11-18				
McFarland.....					2	2- 4-19				
Meade.....	4	7- 4-18								
Medicine Lodge.....	1	2-26-19			1	2-26-19				
Manchester.....					8	5-28-19				
Miltonvale.....	6	8-28-18			6	8-28-18				
Miltonvale.....	3	4-30-19			3	4-30-19				
Mineral.....	2	2-25-19								
Minneapolis.....	6	8-29-18			6	8-29-18				
Minneapolis.....	3	5- 3-19			3	5- 3-19				
Moline.....	5	7-27-18								
Moran.....	6	8-16 to 18-18								
Mound City.....	5	7-24-18								
Mound City.....	2	6-20-19								
Moundridge.....	2	12-13-18								
Mulberry.....	2	2-24-19								
Mulvane.....	2	2-24-19								
Mulvane.....	2	3-26-19								
Neodesha.....	4	8- 5-18	1	8- 6-18						
Neodesha.....	1	8- 6-18	2	3- 6-19						
Neodesha.....	2	3- 6-19								
Natoma.....	2	4- 3-19								
Newton.....	2	11- 9-18	2	11- 9-18	2	11- 9-18				
Newton.....	2	3-27-19	2	3-27-19	2	3-27-19				
Nickerson.....	2	5- 2-19								
Niotaze.....									*1	10- 2-18
Norton.....	1	8-16-18	1	8-16-18						
Norton (State Sanatorium).....			1	8-16-18						
Norton (State Sanatorium).....			1	5- 2-19						
Oakley.....	5	7-16-18			6	7-16-18				
Oakley.....	2	1-13-19			2	1-13-19				
Oberlin.....	5	7-19-18								
Olathe.....	1	11-25-18			1	11-25-18				

* Industrial waste.

INSPECTIONS—CONTINUED.

Town.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
Olathe.....	1	1-27-19			1	1-27-19				
Ogden.....	5	8-14-18	5	8-14-18						
Onaga.....	2	1-23-19			6	8-26-18				
Onaga.....					2	1-23-19				
Oseage City.....	1	8-22-18	1	8-22-18	1	1-9-19				
Oseage City.....	2	1-9-19	2	1-8-19						
Osawatomie.....	1	9-10-18			1	2-5-19				
Osawatomie.....	1	2-5-19								
Osawatomie.....	2	3-12-19								
Osawatomie.....	1	3-20-19								
Osborne.....	6	7-23-18								
Oskaloosa.....	6	7-13-18								
Oswego.....	4	8-7-18								
Oswego.....	6	8-10-18								
Oswego.....	1	9-2-18								
Oswego.....	1	4-4-19	1	4-4-19						
Ottawa.....	1	8-17-18			7	8-22-18	1	8-17-18		
Ottawa.....	2	2-6-19			2	2-6-19	2	2-6-19		
Ottawa.....	1	2-14-19								
Oxford.....	1	3-26-19								
Paola.....	1	2-5-19								
Parsons.....	6	8-4-18	1	8-21-18	1	12-20-18				
Parsons.....	1	12-6-18	1	8-26-18	1	1-9-19				
Parsons.....	1	2-2-19								
Peabody.....	1	3-27-19								
Peru.....	1	10-2-18								
Peru.....	1	10-21-18								
Peru.....	2	4-11-19								
Phillipsburg.....	3	4-26-19			3	4-26-19				
Pittsburg.....	1	1-8-19	1	1-8-19	1	1-8-19				
Pittsburg.....			1	2-4-19						
Plainville.....	6	7-26-18			6	7-26-18				
Pleasanton.....	2	6-20-19								
Pleasanton.....	5	7-24-18								
Potwin (proposed).....	1	3-22-19	1	3-22-19						
Protection.....	4	7-7-18								
Pratt.....	2	4-22-19	2	4-22-19	2	4-22-19				
Roper.....					2	4-11-19				
Russell.....	2	1-16-19								
Sabetha.....	6	7-19-18	6	7-19-18						
Sabetha.....	2	10-23 to 26-18	2	10-24-18						
Sabetha.....	2	1-29-19								
St. John.....	4	7-23-18	4	7-23-18						
St. Francis.....	5	7-18-18								
St. Marys.....	5	7-20-18								
Salina.....	6	9-2-18	5	8-13-18	6	9-2-18				
Salina.....	2	4-29-19	1	10-30-18	2	4-5-19				
Salina.....			2	4-29-19						
Scammon.....	2	2-26-19								
Scandia.....	3	4-23-19								
Scott City.....	2	11-5-18								
Sedan.....	2	4-9-19	2	4-9-19						
Sedgwick.....	4	7-22-18								
Seneca.....	6	7-20-18	6	7-20-18	3	4-23-19				
Seneca.....	3	4-28-19	3	4-28-19						
Sharon Springs.....	5	7-16-18			5	7-16-18				
Sharon Springs.....	2	1-1-19			2	1-1-19				
Sharon Springs.....	1	3-4-19			1	3-4-19				
Selkirk.....					2	11-5-18				
Simpson.....	3	5-1-19								
Smith Center.....	1	7-23-18								
Smith Center.....	3	4-24-19								
Solomon.....	2	5-26-19			2	5-26-19				
Spearville.....	4	7-27-18								
Stafford.....	4	7-23-18	4	7-23-18						
Sterling.....	2	5-2-19								
Stockton.....	6	7-22-18								
Strong City.....	2	3-15-19			2	3-15-19				
Sylvan Grove.....	2	4-2-19								
Tipton.....	5	8-17-18								
Tonganoxie.....	6	7-13-18								
Topeka.....	6	8-26-18			6	8-26-18	6	8-26-18	1	2-10-19
Topeka.....	1	2-22, 30, 31-19			1	2-8-19			1	2-12-19
Topeka.....	1	2-8-19							2	4-1-19
Towanda.....	5	7-26-18	5	7-26-18						

INSPECTIONS—CONTINUED.

Town.	Waterworks.		Sewers.		R. R. waters.		Bottled waters.		Special.	
	No.	Date.	No.	Date.	No.	Date.	No.	Date.	No.	Date.
Turon.....	4	7- 5-18								
Udall.....	5	8-23-18								
Udall.....	1	3-28-19								
Utica.....	2	11- 6-18								
Valley Falls.....	6	7-12-18	6	7-12-18						
Valley Falls.....	2	10-30-18	2	10-30-18						
Valley Falls.....	2	1-28-19	1	11-12-18						
Valley Falls.....			2	1-28-19						
Waconda Springs.....							3	5- 2-19		
Wa Keeney.....	2	1-14-19								
Wakefield.....	6	8-28-18			6	8-28-18				
Waldo.....	6	7-26-18								
Wamego.....	5	7-20-18								
Washington.....	2	3-19-19	2	3-19-19						
Waterville.....	6	7-10-18								
Waverly.....	2	2-14-19								
Weir City.....	2	2-24-19								
Wellington.....	4	7-11-18	4	7-11-18	5	8-21-18				
Wellington.....	5	8-21-18	1	12- 3-19	1	2-28-19				
Wellington.....	1	12- 3-18	1	2-28-19						
Wellington.....	1	2-28-19								
Wellington.....	1	3-12-19								
Wellington.....	2	5- 5-19								
Westmoreland.....	6	7-11-18								
West Plains.....	4	7- 4-18								
Wichita.....	5	8-23-18								
Wichita.....	1	11- 8-18			5	8-23, 24-18	5	8-23, 24-18		
Wichita.....	1	1-21-19			1	1-21-19				
Wichita.....	1	5- 8-19			1	2-28-19				
Wilson.....	2	1-17-19								
Winfield.....	5	8-22-18								
Winfield.....	1	2-28-19	1	2-28-19	1	2-28-19	5	8-22-18		
Yates Center.....	5	7-10-18	5	7-10-18						

A summary of the foregoing table is as follows:

Inspection of waterworks	368
Inspection of sewers	99
Inspection of railroad supplies	139
Inspection of bottled-water plants	21
Special trips	7
Total	<u>634</u>

CONSTRUCTION WORK.

The effect of the war on prices of construction materials has been to curtail construction work on water and sewage plants greatly, and as a result the following list of work does not contain many large jobs, but it is interesting to note that within the past two weeks applications for permits have been sent in by seven cities which contemplate water or sewage systems.

The following work has been taken up or completed within the last year:

- ALTOONA. Filter plant completed.
- ATCHISON. Storm sewer to enclose White Clay creek being planned.
- AUGUSTA. Additions to sewage-disposal and filter plant completed.
- BAXTER SPRINGS. Sewer system and waterworks system under construction.
- BELLEVILLE. Aërators and sedimentation and storage basins for use with iron-impregnated well water completed, and apparatus for lime feeding being installed.
- BELOIT. Filter plant completed and supply changed from wells to the Solomon river.
- CALDWELL. New well supply developed. Pipe line to town under construction.
- CHANUTE. Bacteriological equipment installed in laboratory.
- CHAPMAN. New well dug.
- CEDARVALE. Sewer system proposed.
- COTTONWOOD FALLS. Sewer system, with disposal plant under construction.
- DODGE CITY. Waterworks extensions.
- DOUGLASS. Sewers under construction.
- EFFINGHAM. Waterworks system proposed.
- EL DORADO. Extensive surveys made for future water supply. Plan to impound water in creeks away from oil development.
- ELK CITY. Contemplates waterworks.
- EUREKA. Filter plant completed.
- FORT SCOTT. Bonds voted for waterworks improvement, to include dams in Marmaton river and filter plant.
- CAMP FUNSTON. Iron removal and filter plant constructed.
- GALENA. City drilling deep well with intention of abandoning old supply from Shoal creek.
- GARNETT. Dam under construction to impound additional water supply. Improvements made to sewage-disposal plants.
- GEUDA SPRINGS. Waterworks and sewer systems completed.
- HEBINGTON. Liquid chlorine machine installed.
- HIAWATHA. New wells and extensions under construction.
- HOPE. New waterworks practically completed.
- HORTON. Sewage disposal plant rebuilt throughout.
- HUMBOLDT. Sewer system extended to cover entire c' y.

HUTCHINSON. Sewer extensions.

INDEPENDENCE. Liquid chlorine machine installed.

IOLA. Improvements to settling basins and chemical feeding device under way. Liquid chlorine machine installed.

JUNCTION CITY. New wells and extensions to waterworks and sewer systems.

KANSAS CITY. Storage reservoir completed and improvements made in settling basins.

KINSLEY. City contemplates developing a new supply of softer water.

LANSING (STATE PRISON). New grit chambers installed at river pumping station and improvements to pumping plant contemplated.

LAWRENCE. New iron-removal and softening plant completed.

LEWIS. Bonds voted for water system.

LYNDON. Sludge-drying bed constructed at sewage-disposal plant.

LYONS. Additional supply of water developed and extensions to system under way.

MANKATO. Hypochlorite plant installed.

MARQUETTE. Sewage system completed.

MEDICINE LODGE. Hypochlorite plant installed.

OGDEN. Waterworks and sewers completed.

OSWEGO. Improvements to pumping equipment and intake planned.

OTTAWA. Extensive survey being made to locate additional water supply.

OXFORD. New well and extensions to city mains under construction.

PEABODY. Survey being made for additional water supply.

PERU. New waterworks under construction.

PHILLIPSBURG. Temporary hypochlorite plant installed to treat old supply. New supply developed but not connected.

POTWIN. Waterworks contemplated.

SABETHA. Liquid chlorine machine installed.

SHARON SPRINGS. Bonds voted for new water supply.

SMITH CENTER. Improvements to water supply under way.

SOLOMON. Water survey being made.

TIPFON. Waterworks completed.

TOPEKA. Liquid chlorine machine installed.

VALLEY FALLS. Liquid chlorine machine installed.

WAMEGO. New sewer system contemplated.

WICHITA. Liquid chlorine machine installed.

WINFIELD. New water supply developed and connected to city mains.

WATERWORKS PLANT OPERATION.

Since it was impossible to keep as close a check as usual on water-plant operation during the past year, it has been our policy to push the free use of sterilizing agents, particularly liquid chlorine, as a safeguard from the effects of lax operation methods.

The following table shows the results obtained from weekly tests on our surface-water plants:

SURFACE-WATER TABLE, 1918-1919.

are as if
than 50;
n 200; 1
ut of 5, 1
tests for
use total count is greater than 200. All reports are subject to findings of this survey.

G—Good. Total count 50 to 100; tests for *B. coli* all negative.
D—Doubtful. Total count over 200; 1 out of 5, 1 cc.; tests for *B. coli* positive.
reported as "doubtful" when the total count is less than 200, and as "bad" when

Town.	July.	August.	September.	October.	November.	December.
Atchison	G D E D	D G D E F B	D D D F B F	G F G F	F B F B F E	E B E E F
Atchison	F G E B	F F E B F B	D F B D F F	F F G E	D F F E	G F F E
Augusta	D D D B	D G F B B D	F D D B B D	B B B B	D B B B D D	G B B D D F
Baldwin	B D B B	D D B B B D	B B B B D F	B B B B	B B B B D D	B B B B D D
Bellevue	F B D F	B D D B	D D F D F	G F D B F	D G D D F F	E F B D F
Burlington	B D B B	D D D B	G F B B D D	F D B F F	F F F F	F B D F
Caney	B D B B	D D D B	B B B B D F	B B B B	B B B B D D	D F F F
Cedar Vale	F B D F	B D D B	D D F D F	G F D B F	D G D D F F	F B D F
Chanute	B D B B	D D D B	G F B B D D	B B B B	B B B B D D	D F F F
Cherryvale	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Coffeyville	B D B B	D D D B	G F B B D D	B B B B	B B B B D D	D F F F
Council Grove	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Douglas	B D B B	D D D B	G F B B D D	B B B B	B B B B D D	D F F F
El Dorado	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Emporia	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Fort Scott	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Frederick	B D B B	D D D B	D D F D F	B B B B	B B B B D D	B B B B
Gallatin	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Garnett	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Horton	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Hubbards	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Independence	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Iola	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Jewell City	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Kansas City	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Landing	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
La Harpe	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F
Leavenworth	B D B B	D D D B	D D F D F	F D B F F	F F F F	F B D F
Lyndon	B D B B	D D D B	D D F D F	B B B B	B B B B D D	D F F F

SURFACE-WATER TABLE, 1918-1919—CONCLUDED.

Standards for reporting tests are as follows:
E—Excellent. Total count less than 50; tes

G—Good. Total count 50 to 100; tests for B. coli all negative.
D—Doubtful. Total count over 200; 1 out of 5, 1 cc.; tests for B. coli positive.
reported as "doubtful" when the total count is less than 200 and as "bad" when
orts are subject to findings of field survey.

Town.	January.	February.	March.	April.	May.	June.
Atchison	F	F	F	F	F	G
Attoons	G	G	G	D	D	D
Augusta	E	E	E	E	E	E
Baldwin						
Beloit						
Burlington						
Burlington						
Caney						
Cedar Vale						
Chanute						
Cherryvale						
Coffeyville						
Council Grove						
Douglas						
El Dorado						
Emporia						
Fort Scott						
Fredonia						
Galesburg						
Garnett						
Horton						
Humboldt						
Independence						
Iola						
Jewell City						
Kansas City						
Lansing						
La Harpe						
Lawrence						
Lyndon						

Marysville.....	F	B	B	G	E	G	F	F	E	G			
Medicine Lodge.....	B	F	B	D	F	G	E	E	G	G	D	E	G
Moran.....	B	F	B	B	B	G	E	E	G	G	B	B	B
Mound City.....	F	B	E	F	F	G	G	G	G	F	B	B	D
Neodesha.....	G	G	B	D	D	G	F	F	G	F	E	G	
Olathe.....	G	F	D	F	G	G	F	B	F	E	G	B	G
Osage City.....	G	F	D	F	G	G	F	B	F	E	G	B	G
Oswatimie.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Oswego.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Ottawa.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Paola.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Parsons.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Pleasanton.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Russell.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Sedan.....	E	F	B	E	G	G	F	B	B	G	D	B	B
Washington.....	E	F	B	E	G	G	F	B	B	G	D	B	B

During the past three or four years we have had an increasing number of ground-water plants, particularly those which utilize water from relatively shallow wells, say up to sixty feet, showing evidence of pollution by fecal strains of *B. coli*, and it has been necessary during the past year to install sterilizing devices at a number of such plants.

The writer has discussed this question with other engineers and the same trouble seems to be occurring in many other states. In fact, at a meeting of the Sanitary Engineers' Association of Indiana, held in May, 1919, a resolution was passed which condemned the shallow well as a source of water supply for domestic use.

The following table, which gives the results of bacterial tests on our ground waters for the past four years, is given in illustration of this point.

BACTERIAL RESULTS ON GROUND WATERS.

In this table the numeral indicates the month in which the sample was taken and the letter indicates the condition of the sample.

E—Excellent.

G—Good.

F—Fair.

D—Doubtful.

B—Bad.

Thus, 2 E indicates a sample collected in February and which was in excellent condition. The same standards for reporting were used on these samples as on samples of surface water.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Abilene.....	7 E	2 E	4 E	7 F	3 E
Abilene.....		5 E	8 F		
Abilene.....		8 E			
Almena.....	9 E			8 D	
Almena.....	12 E	11 E	12 E	9 F	
Alton.....	10 B	10 E	1 E	7 D	5 F
Alton.....				8 D	
Anthony.....	9 B	1 F	5 B	7 B	5 D
Anthony.....		7 D	6 B	10 B	
Anthony.....		9 D	11 B		
Arma.....		3 G		2 E	2 F
Arma.....		9 E		5 G	4 F
Arma.....		12 G			
Arkansas City.....	1 E	3 E	4 E	3 E	3 E
Arkansas City.....	3 E	12 E	11 E	6 E	
Arkansas City.....	10 E			8 E	
Arkansas City.....	11 E				
Army City.....				8 F	
Ashland.....	11 B	2 D	9 F	7 F	5 F
Ashland.....		3 F	11 E		
Attica.....	9 F	7 D	6 D	6 G	2 F
Attica.....		9 D	7 D		6 D
Atwood.....	9 D	11 D		10 F	
Atwood.....	12 D				
Argonia.....			8 B	6 D	2 B
Argonia.....			9 B		5 G
Belle Plaine.....	2 E	5 E		3 E	
Belle Plaine.....	9 E	10 E		8 D	
Baxter Springs.....	9 E	12 E		2 E	2 G
Baxter Springs.....	11 E				
Belleville.....	3 D	8 D	1 D	6 B	3 D
Belleville.....	10 B		5 D	12 D	5 D
Belleville.....	11 B		11 B		6 D
Bennington.....	9 D	1 D	12 F	8 F	5 F
Bennington.....		2 D			
Bennington.....		11 F			
Blue Rapids.....	8 G	11 E	12 E	8 G	5 D
Blue Rapids.....	8 E				5 F
Blue Rapids.....	11 E				
Bonner Springs.....	9 G	1 G	7 D	7 G	6 E
Bonner Springs.....		2 E	8 D	7 E	
Bonner Springs.....		10 G			
Bucklin.....	1 E	2 F	1 E	5 G	5 D
Bucklin.....	10 F	7 F	5 G	6 G	5 G
Bunkerhill.....	2 D	2 D	2 D	3 G	1 B
Bunkerhill.....	9 B	3 D	5 E		5 F
Burden.....	11 B		9 B	3 E	5 B
Burden.....				3 B	
Burr Oak.....	9 E	6 E	10 F	6 G	2 G
Burr Oak.....	11 E		12 E		6 D
Burr Oak.....	12 E				
Burrton.....	5 B	1 F		6 F	2 F
Burrton.....		6 D	1 E		5 E
Burrton.....			7 E		
Caldwell.....	2 D	1 F	9 F	1 D	5 B
Caldwell.....	10 B	5 G		5 D	
Caldwell.....		7 B		7 D	
Caldwell.....		12 B			
Cawker City.....	3 B	1 E	10 F	6 D	5 D
Cawker City.....	4 F	11 E	11 G	7 B	
Cawker City.....	7 D			8 D	
Cawker City.....	9 D				

BACTERIAL RESULTS—CONTINUED.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Chapman	10 E	2 G	11 F	7 F	1 G
Chapman				9 F	
Cherokee		1 E		2 E	3 E
Cherokee		12 G			6 G
Chetopa	10 E	6 G		2 E	8 F
Chetopa		12 F			
Cimarron	10 B	2 E	1 E	4 E	5 F
Cimarron	11 D		9 D	11 G	
Cimarron			12 D		
Clay Center	1 G	6 E	10 E	6 D	2 F
Clay Center	9 E				5 B
Clay Center					6 F
Clearwater	10 D	1 E	4 E	8 G	2 F
Clearwater		10 D			6 D
Clifton	1 F		1 E	6 F	3 F
Clifton	10 E				
Clifton	11 D				
Clyde	8 F		1 E	6 G	4 G
Clyde	11 E		9 E		
Colby	9 E	10 B	8 E	7 F	2 D
Colby			12 G		
Coldwater	9 F	2 E	1 E	7 E	5 D
Coldwater			7 E	2 E	6 E
Columbus	9 E	11 F	7 E	2 E	8 F
Columbus	11 D	12 F			
Concordia	7 B	6 D	1 E	2 E	4 F
Concordia	8 B		5 E	8 D	
Concordia	10 E				
Conway Springs		1 E	5 E	3 E	5 G
Conway Springs		9 E	6 E		
Conway Springs		10 E			
Cottonwood Falls	5 E	1 E	7 G	6 G	3 E
Cottonwood Falls	10 E		8 E		
Delphos	10 D	1 E	12 D	7 F	
Delphos	11 F	11 D		2 F	
Dighton			2 D	4 E	5 F
Dighton				11 F	
Dodge City	9 E	2 E	1 E	6 F	6 G
Dodge City			5 F	7 E	
Dodge City			11 E		
Downs	7 E	7 E	1 E	6 F	5 F
Downs		11 F	7 F	12 G	
Downs			9 E		
Ellinwood	8 D	8 E	1 E	6 D	5 F
Ellinwood	9 G	8 D	5 D	11 D	
Ellinwood			9 E	12 G	
Ellis	2 E	3 E	2 E	8 E	1 G
Ellis	9 F	5 E	6 D		6 G
Ellis		8 F	9 B		
Ellis			10 B		
Ellsworth		2 E	1 E	8 E	1 F
Ellsworth		4 E	11 E		
Ellsworth		8 E			
Elkhart			1 E	7 G	
Elkhart				11 D	
Englewood	9 F	2 E	1 F	6 F	1 D
Englewood	11 F	7 D	6 F		6 D
Enterprise	2 G	7 E	4 E	5 D	5 D
Enterprise	7 D	9 E		6 F	
Enterprise	9 F			7 G	
Erie	1 E		7 F	2 E	3 D
Erie	9 D				6 D
Erie	11 E				
Esbon	12 F	5 D	12 E	6 F	2 B
Esbon		11 D			5 B
Eureka	10 D	2 E	11 B	5 F	5 B
Eureka	10 F	11 E	11 B	7 F	
Eureka				7 B	
Florence	8 B	7 B	8 E	6 F	4 F
Florence	10 B		5 E	8 F	
Florence	11 B		7 D	9 B	
Florence	12 D				
Fowler	10 D	2 E	1 E	7 F	6 E
Frankfort	9 E	2 E	1 E	7 E	6 G
Frankfort		8 E			

BACTERIAL RESULTS—CONTINUED.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Frontenac.....	10 B	2 E		2 E	2 G
Frontenac.....	11 F	12 E			5 D
Garden City.....	4 E	9 E	1 E	4 E	6 F
Garden City.....	10 G		12 G	11 G	8 F
Genda Springs.....				8 D	6 F
Girard.....	9 D		7 D	6 F	3 G
Girard.....	11 D	7 B			6 G
Girard.....		8 E			
Glasco.....	9 D	1 G	11 E	7 D	6 D
Glen Elder.....	8 D	11 E	9 G	6 D	2 E
Glen Elder.....					5 B
Goodland.....	10 E	10 E		6 G	
Goodland.....	12 G			7 G	
Great Bend.....	10 E	8 E	1 E	6 G	8 E
Great Bend.....		8 E		11 D	5 E
Green.....	8 G				5 G
Greensburg.....				7 G	
Greenleaf.....	1 G	7 E	1 E	5 E	6 G
Greenleaf.....	10 B		5 E	7 E	
Greenleaf.....	11 G				
Halstead.....	1 E	1 G	1 E	6 G	3 G
Halstead.....	10 G				
Hanover.....	8 D	8 E	8 E	2 E	1 B
Hanover.....		11 G	12 E		4 G
Harper.....	3 G	2 E	9 E	7 G	3 F
Harper.....	9 G	7 G			5 B
Harper.....					6 F
Havensville.....		2 D	1 E	7 B	6 B
Havensville.....		6 F		7 B	
Havensville.....		10 B			
Hays.....	9 F	8 E	2 E	3 D	1 F
Hays.....		9 F		5 D	6 G
Herington.....	7 B	4 B	2 F	2 D	2 B
Herington.....		9 B	7 B	6 B	
Herington.....			8 B	7 B	
Herington.....			12 D	9 G	
Hiawatha.....	8 D	5 D	2 G	7 D	2 E
Hiawatha.....	9 E	10 D	7 G	8 B	
Hiawatha.....				11 F	
Highland.....	8 G	7 G	2 F	7 B	6 D
Highland.....	11 F		7 D	8 B	
Highland.....			8 E	9 D	
Hill City.....	3 F	10 F	2 E	3 E	3 B
Hill City.....	10 F		8 E		4 G
Hoisington.....	6 F	3 E	1 E	6 D	5 F
Hoisington.....		5 G	3 E	11 D	
Hoisington.....		8 B	5 E	12 E	
Hoisington.....			9 B		
Holton.....	6 B		2 E	11 F	6 D
Holton.....	11 D		5 F		
Hope.....				7 D	
Holyrood.....	2 G	3 G	4 E	6 G	5 F
Holyrood.....	10 D		9 B	9 G	
Holyrood.....	12 E		10 D		
Holyrood.....			11 E		
Hutchinson.....	6 F	8 E	5 G	6 F	5 E
Hutchinson.....	9 F	8 F		8 G	
Jamestown.....	10 E	1 E			6 F
Jamestown.....		11 E		5 E	
Jamestown.....				7 G	
Jetmore.....	4 F	8 E	1 E	6 F	6 F
Jetmore.....	10 F	7 E	5 F	10 F	
Junction City.....	7 E	2 D	4 E	8 D	5 E
Junction City.....		9 E	7 D		
Kanopolis.....	10 D	2 F	2 F	3 E	1 B
Kanopolis.....			10 D		6 D
Kensington.....	5 D	1 F	12 G	9 D	3 D
Kensington.....	10 D	11 F			5 F
Kensington.....	11 B				
Kingman.....	10 F	1 F	11 F	7 D	6 G
Kirwin.....	10 F	5 F		6 F	6 D
Kirwin.....		11 E		7 D	
Kinsley.....		2 E	1 E	6 B	4 D
Kinsley.....		3 G		7 D	
Kiowa.....	12 F	1 G	6 E	6 B	5 F

BACTERIAL RESULTS—CONTINUED.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Kiowa		11 E		6 D	
La Cygne	10 D	1 F	1 E	1 F	3 F
La Cygne				7 B	
La Cygne				10 B	
Larned	3 E	2 E	4 E	7 F	6 F
Larned	6 G	3 D	9 F	8 D	
Larned		7 E	10 D	11 D	
Larned		9 E	12 F		
Lawrence					1 D
Lebanon	1 F	4 E	12 F	7 D	3 B
Lebanon	11 D	11 E			5 D
Liberal	11 E	7 E	1 E	7 G	5 F
Liberal			5 D		
Lincoln	1 E	2 E		3 E	3 D
Lincoln	11 F	10 D			4 G
Lindsborg	7 E	5 E	8 E	7 F	3 F
Lindsborg					5 E
Little River	10 B	3 E	9 D	7 G	3 F
Little River	11 E	7 D	10 E		5 G
Little River		9 F			
Logan	1 E	2 D	7 B	6 D	5 F
Logan	11 F	2 E			
Lucas	2 D	2 E	2 E	5 E	4 D
Lucas	10 F		10 E		6 D
Luray	12 D	5 E	2 G	3 G	4 B
Luray					6 F
La Crosse			2 E	4 E	
La Crosse				7 B	
La Crosse				11 D	
Lyons	11 F	3 E	10 D	6 F	3 G
Lyons		10 E	11 E		5 D
McCracken				4 E	6 D
McCracken				11 B	
McCune	10 B	1 D	4 E	2 F	3 G
McCune					6 D
McPherson	2 D	1 E	2 E	9 F	5 E
McPherson	7 F	12 F	8 G	12 F	
Macksville				7 D	
Madison	8 F	1 E	10 F	7 D	4 F
Madison	12 D	7 E			
Manhattan	4 G	5 F	1 E	2 E	
Manhattan	6 B		8 F	6 F	
Manhattan	8 F			7 D	
Manhattan	11 G			11 F	
Mankato	12 F	2 E	9 B	5 G	5 B
Mankato		11 B	12 B	6 B	
Marion				7 B	
Marquette	7 E	3 G	2 F	7 B	5 B
Marquette	11 G		8 G	8 B	
Marquette				11 B	
Meade	2 E	2 E	1 E	6 F	6 F
Meade	11 E			7 F	
Miltonvale	11 F	2 F	4 F	2 E	5 F
Miltonvale		5 E		8 E	
Mineral	11 B	2 E	11 D	2 E	3 D
Mineral		12 E			6 B
Mineral					6 B
Minneapolis	11 F	1 E	3 E	6 G	5 G
Minneapolis		11 E	12 E	11 D	
Moline	10 B	3 D	5 D	8 G	3 F
Moline	11 B	5 E		7 B	
Moline		8 B			
Moline		11 E			
Moundridge	11 F	3 D	2 E	12 F	6 E
Mulberry	2 E	1 F		2 E	3 E
Mulberry	11 D	12 E			6 F
Mulvane	10 F	1 G	8 G	3 E	3 G
Mulvane		10 E			4 D
Natoma	1 F	2 E	2 D	3 F	3 F
Natoma	10 D		3 G	7 F	4 G
Newton	10 F	1 F	1 G	6 F	
Newton	11 E	9 D		11 F	
Newton		10 E			
Nickerson	3 F	3 F	1 F	6 F	3 D
Nickerson	11 D				5 G

BACTERIAL RESULTS—CONTINUED.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Norton	10 E	10 E	9 F	8 B	6 F
Norton			12 E	9 D	
Oakley	11 E	9 E	4 E	7 F	2 F
Oakley			6 F		
Oakley			12 E		
Oberlin	1 E	5 E	12 G	9 F	
Oberlin	12 E	11 E			
Ogden				8 D	6 E
Onaga	11 E	1 D	1 D	6 D	2 F
Onaga		5 D			
Osborne		1 G		6 F	6 E
Osborne		8 G		7 F	
Osborne		8 E			
Oskaloosa			11 D	7 D	
Oxford	10 D	10 F	8 D	8 E	3 F
Oxford	11 E		10 D	5 E	
Peabody	11 D	1 D	1 E	6 D	3 D
Peabody			7 E		
Peabody			9 D		
Peru					1 E
Phillipsburg	12 D	11 F	12 B	6 B	5 B
Phillipsburg				7 B	
Plainville	10 F	8 F	1 F	8 F	3 F
Plainville			2 D	7 D	
Plainville			3 F		
Plainville			6 F		
Protection	4 D	2 B	1 E	7 D	6 G
Protection	10 F	3 F	9 F		
Pratt	2 F	8 F	6 D	7 F	1 E
Pratt		7 F			4 G
Pittsburg	9 D	7 F	2 F	2 E	1 E
Pittsburg	10 F		7 E	8 F	
Pittsburg	11 D			12 D	
Sabetha	11 G		2 D	1 F	2 E
Sabetha			6 B	3 G	
Sabetha			7 D	9 D	
Sabetha			12 D	11 G	
St. Francis	12 F	5 B		6 F	
St. Francis		10 G		8 D	
St. Francis				9 F	
St. John	11 E	3 F	9 E	2 D	6 G
St. Marys	6 E	2 D	1 E	6 F	
St. Marys	11 G	11 F		7 G	
Salina	7 F	10 E	6 E	3 E	4 B
Salina			6 E	7 E	5 D
Scammon	10 F	1 F		2 E	3 B
Scammon		12 E			6 E
Scandia	11 B	11 F		6 F	2 G
Scandia	12 D				
Scott City	12 B	4 F	2 G	4 D	
Scott City				8 B	
Scott City				11 D	
Sedgwick	2 F	3 F	1 E	6 F	6 F
Sedgwick	11 E			6 F	
Sedgwick				7 D	
Seneca	11 B	1 G	2 F	7 B	5 D
Seneca	11 D	5 F	5 E	8 F	5 G
Seneca		10 F	10 E		
Sharon Springs	9 E	3 F	2 E	7 B	1 B
Sharon Springs			7 E		3 F
Simpson		4 G	12 E	6 F	2 F
Simpson		7 E			5 G
Simpson		11 E			
Smith Center	7 F	11 E		6 B	5 B
Smith Center	12 F			7 B	
Smith Center				11 D	
Spearville	9 E	3 D	1 E	6 F	
Spearville		7 F		7 F	
Stafford	9 F	3 E	9 E	7 D	
Stafford				8 D	
Stafford				9 E	
Sterling	12 E	3 E	1 E	6 F	5 E
Sterling				7 F	
Stockton	12 F	1 E	10 D	7 F	6 B
Stockton		8 E	11 E		

BACTERIAL RESULTS—CONCLUDED.

NAME OF CITY.	1915.	1916.	1917.	1918.	1919.
Sylvan Grove.....	8 G	2 E	2 E	3 E	2 B
Sylvan Grove.....	12 E			8 F	4 E
Strong City.....	8 B	1 E	3 E	7 D	3 F
Strong City.....	8 E	7 E	9 F	9 F	
Strong City.....	9 D				
Syracuse.....	11 F	2 E	1 E	7 B	
Syracuse.....			12 E	12 D	
Tipton.....					4 D
Tipton.....					6 F
Towanda.....				9 B	
Towanda.....				11 D	
Topeka.....	11 F	2 E	2 E		2 G
Topeka.....		4 G	4 E		
Topeka.....		5 G	8 E		
Topeka.....		11 E			
Turon.....	12 D		1 F	7 G	
Turon.....			7 F		
Tonganoxie.....				7 F	6 E
Udall.....		8 G	4 E	3 E	4 D
Udall.....		6 B		8 D	
Utica.....				4 F	
Valley Falls.....	12 F	1 E	5 F	7 B	2 E
Valley Falls.....				9 B	
Valley Falls.....				10 D	
Wa Keeney.....	9 F	4 E		3 E	1 E
Wa Keeney.....		10 E			6 F
Wakefield.....	11 E	2 E	9 F	6 F	1 B
Waldo.....	12 F	2 F	2 G	8 E	6 E
Waldo.....				8 D	
Wamego.....	7 F	2 F	2 E	7 G	
WaRego.....			12 E		
Waterville.....	12 E	8 E	1 E	7 E	
Waverly.....	11 B	11 B		6 B	2 D
Waverly.....	12 E				
Weir City.....	11 D	1 F		2 E	2 F
Weir City.....		12 E			6 D
Wellington.....	10 B	7 B		3 E	4 F
Wellington.....		8 D		7 F	
Wellington.....		5 E			
Wellington.....		12 D			
West Plains.....				6 F	
West Plains.....				7 D	
Westmoreland.....		1 D		7 D	
Westmoreland.....		5 F			
Wichita.....	3 E	8 F	1 F	3 E	3 E
Wichita.....	7 F	8 F	9 E	8 F	
Wichita.....	7 D		11 E	11 F	
Wilson.....	2 B	2 E	2 F	3 E	1 F
Wilson.....		8 B			6 B
Wallace.....					1 F

The past two years have been extremely trying ones to operators of waterworks plants on account of the extremely dry weather, which caused not only a deficiency in the supply but also an increased demand for water.

Up to November, 1918, there was a deficiency of rainfall of nearly 18 inches in the preceding eight years; and in only one year, namely, 1915, did the precipitation reach the normal.

This caused a deficiency not only in the surface supplies, which was to be expected, but also in the ground-water supplies, due to the lowering of the ground-water level and the depletion of the underground storage reservoirs.

Conditions are now slowly coming back to normal, and the indications are that there will be no further trouble from this source for a year or so at least. However, during the past year complete water failures have occurred at Jewell City, Paola, Garnett, Pleasanton, Cherryvale, Moline and Jetmore; and serious shortages were experienced at Olathe, Ottawa, Osage City, Lyndon, Waverly, Fort Scott, Erie, Neodesha, Independence, Coffeyville, Parsons, Caney, Sedan, Cedarvale, Madison, Burden, La Cygne, Augusta, El Dorado, Herington, Council Grove, Douglass, Washington, Highland, Mankato, Esbon, Phillipsburg, Scott City, Hoisington and Anthony.

The above weather conditions have raised another point—more important from the public-health standpoint than that of supply—namely, the necessity of furnishing potable water from streams which are polluted with sewage to an unusual extent. As a matter of fact, during the year just past several of the streams in southeastern Kansas actually stopped flowing, and the only water available, beyond that which was contained in the artificial reservoirs formed by dams, was that which was discharged as sewage. In fact, it may be said that during the summer and fall of 1918 the total flow of some of our streams, notably the Verdigris, was used for domestic supplies at least three times before reaching the southern boundary of the state.

This placed a heavy load on a number of our purification plants, and the fact that no water-borne epidemic of typhoid occurred in this district speaks well for their efficiency.

SEWAGE DISPOSAL.

We are gradually getting more and more of the cities which have installed sewage-treatment plants to make provision for their proper operation, and the results in such cases have shown that money so spent is well invested.

The last legislature passed a bill which enables a city to levy a tax for the maintenance of sewage-disposal plants, and this will enable cities which have heretofore been unable to carry on this work on account of lack of funds, to secure the maximum efficiency from their plants.

SPECIAL WORK.

The effect of the pollution of the Walnut river and of the ground water of Butler county by wastes from oil wells upon the water supplies of that district was so marked that the greater part of the summer and fall of 1918 was spent by the writer in a study of the problem.

After going over the matter thoroughly, and after having several conferences with the director of the Kansas Geological Survey, the executive committee of the Midcontinent Oil and Gas Association, representatives from the petroleum division of the United States Bureau of Mines, and numerous oil operators, it was concluded that the best method of combating the nuisance and preventing its spread to other parts of the state was by getting suitable laws passed by the 1919 legislature. Accordingly, a committee was appointed by the Midcontinent Oil and Gas Association, and in connection with Mr. Moore, of the Kansas Geological Survey, Mr. Hunt, of the attorney-general's office, and the writer, a bill was formed which provided for an organization to study the conditions operating in the fields, to see that proper precautions were taken toward the prevention of salt-water production, and to keep a record of all drilling operations in the state.

This bill failed to pass, and, as has been predicted, the Butler county oil field is extending north into Marion county, and extensive development is now going on in the drainage area of Doyle creek, tributary to the Neosho river, which is our most important stream from a water-supply standpoint.

The attempt is being made to handle this problem under existing laws, and an organization of the users of Neosho river water is being formed to push the matter.

The meat of the situation is, that in view of the fact that no one can predict the extent of the future development of oil fields in Kansas, and in view of the fact that more and more of our towns and cities are being forced to abandon their ground-water supplies for the more abundant surface-water supplies, legislation providing for suitable control of oil operation in this state is badly needed.

PLUMBING.

This division was asked in January, 1919, by the Kansas Association of Master Plumbers to formulate a plumbing code and supervise the installation of plumbing in this state, and since the organization of this department was inadequate for this work, a bill was drawn up which provided for the personnel and funds necessary. This bill was introduced and pushed by the Master Plumbers' Association and failed to be passed by the legislature.

The control of the installation of sanitary plumbing is an important point in handling the entire problem of sewage disposal, and the passage of the above bill would have given this department much help in its work.

The following orders were issued during the past year:

Leavenworth, waterworks improvement.

Parsons, waterworks improvement.

Iola, waterworks improvement.

La Cygne, waterworks improvement.

GENERAL.

In 1915 the work coming under this department comprised the supervision of the operation of 155 ground water supplies:

40 surface water supplies.

84 sewer systems.

43 sewage-disposal plants.

At the present time we have in Kansas:

178 ground water supplies.

48 surface water supplies.

101 sewer systems.

64 sewage-disposal plants.

95 points where water is taken for use on common carriers.

Therefore, based on one inspection per year of ground water supplies, four inspections per year on surface water supplies, and two inspections per year on sewage-disposal plants and railroad supplies, the number of regular inspections in 1915 was 401, and for the present year is 688—an increase of 287, or 72 per cent.

These figures are given to show the necessity of increasing the force in this division in the near future if the past standard of efficiency is maintained.

Respectfully submitted.

F. M. VEATCH, *Acting Engineer.*

Annual Report of Engineer, Year Ending June 30, 1920.

To the Honorable Members of the State Board of Health:

The work of this division for the past year, as for the two preceding years, necessarily has been confined strictly to that which is prescribed by law and by the regulations of the State Board of Health, on account of the changing personnel, the immense amount of work necessary to be done, and the great difficulty experienced in obtaining capable and well-qualified help. The routine work as required by the regulations of the State Board of Health, adopted under the three water and sewage laws, has been kept well up to date. In the effort to regulate and supervise properly the public water supplies, sewerage systems, ice and bottled-water supplies and the railway waters, practically no research or educational work has been done, except the carrying of five hours' teaching by the engineer in the University. It is hoped that in the next year proper arrangements may be made whereby the State Board of Health work may be further improved upon and enlarged and that the research work, which heretofore has been so important a function of the department, may be taken up again and further extended.

Upon the writer's return to duty, August 6, 1919, it was found that both sections of this division had been remarkably well taken care of under the conditions, the engineering section under the direction of F. M. Veatch and the laboratory under the direction of Miss N. C. Schneider. Extended vacations were taken immediately, which had accumulated during the preceding two years, when practically no advantage had been

taken of the conditions of employment, and great difficulty was experienced in properly carrying on the work during the first few months in the fall.

The following resignations were received during the year: W. A. Burton, assistant engineer, August 1, 1919; Vanera Miller, assistant chemist, October 1, 1919; Frank Rising, shipping clerk, October 1, 1919; F. M. Veatch, assistant engineer, November 1, 1919; Myrtle Greenfield, bacteriologist, January 1, 1920; Edna Haines, clerk and stenographer, February 10, 1920; Vanera Miller, bacteriologist, June 15, 1920; E. T. Cranch, assistant engineer, May 1, 1920.

In order to fill these vacancies the following appointments have been made: A. H. Wieters, assistant engineer, formerly employed, July 1, 1919; William McPherson, shipping clerk, September 15, 1919; Vanera Miller, bacteriologist, January 1, 1920; Elizabeth Bulla, stenographer, February 11, 1920; E. T. Cranch, assistant engineer, March 23, 1920; R. M. Isenberger, bacteriologist, June 15, 1920; Ethel A. Jones, chemist, June 19, 1920.

A part of these resignations and appointments were brought about by the partial reorganization of the laboratory after the writer's return, a part in order to take care of the service during the summer months while vacations are in order, but the more important ones have been made necessary on account of the inability of the department to provide sufficient salaries to attract or hold properly qualified persons in this type of work, for which at the present time there seems to be an unusual demand.

Following Mr. Veatch's resignation in November, a strenuous effort was made to find someone who would accept the appointment as principal assistant engineer at the salary available, but no one could be found until the latter part of March, when Mr. Cranch was appointed. He found it necessary to leave after a service of approximately only one month, and since that time we have been going along with but one assistant engineer.

NEW WATERWORKS PLANTS.

Since July 1, 1919, fourteen new waterworks plants have been undertaken or completed, and no less than thirty have been contemplated and have required more or less work from this department, but have as yet not reached beyond the proposed stage.

The following table includes a new list of all of the waterworks plants in the state at the present time. Those constructed during the past year are indicated by the date 1920 following.

WATERWORKS PLANTS.

<i>City.</i>	<i>Ownership, source and treatment.</i>
Abilene	Municipal, sand spring.
Almena	Municipal, shallow wells.
Alton	Municipal, shallow wells.
Altoona	Municipal, Verdigris river. Sedimentation, coagulation and filtration.
Anthony	Municipal, shallow wells.
Arcadia (1920)	Municipal, deep wells.
Argonia	Municipal, shallow wells.

<i>City.</i>	<i>Ownership, source and treatment.</i>	
Arkansas City	Municipal, shallow wells.	
Arma	Municipal, deep wells.	
Army City	Corporate, Kansas City.	
Ashland	Municipal, shallow wells.	
Atchison	Corporate, Missouri river.	Sedimentation and coagulation.
Attica	Municipal, shallow wells.	
Atwood	Municipal, shallow wells.	
Augusta	Municipal, Walnut river.	Sedimentation, coagulation and filtration.
Baldwin	Municipal, spring.	
Baxter Springs (1)	Corporate, spring.	
Belle Plains	Municipal, shallow wells.	
Belleville (2)	Municipal, shallow wells.	Lime treatment and sedimentation for deferrization.
Beloit	Municipal, Solomon river.	
Bennington	Municipal, shallow wells.	
Blue Rapids	Municipal, shallow wells.	
Bonner Springs	Municipal, shallow wells.	
Bucklin	Municipal, shallow wells.	
Bunkerhill	Municipal, spring.	
Burden	Municipal, shallow wells.	
Burlingame	Municipal, Dagoon creek.	Sedimentation, coagulation and filtration.
Burlington	Municipal, Neosho river.	Sedimentation, coagulation and filtration.
Burns (1920)	Municipal, shallow wells.	
Burr Oak	Municipal, shallow wells.	
Burrton	Municipal, shallow wells.	
Caldwell	Municipal, shallow wells.	
Caney	Municipal, Caney river.	No treatment; not for domestic use.
Canton (1920)	Municipal, shallow wells.	
Cawker City	Municipal, shallow wells.	
Cedarvale	Municipal, Caney river.	
Chanute	Municipal, Neosho river.	Sedimentation, coagulation and filtration.
Chapman	Municipal, shallow wells.	
Cheney	Municipal, shallow wells.	
Cherokee	Municipal, deep wells.	
Cherryvale	Municipal, Verdigris river.	Sedimentation, coagulation and filtration.
Chetopa	Municipal, deep wells.	
Cimarron	Municipal, shallow wells.	
Clay Center	Municipal, shallow wells.	
Clearwater	Municipal, shallow wells.	
Clifton	Municipal, shallow wells.	
Clyde	Municipal, shallow wells.	
Coffeyville	Municipal, Verdigris river.	Sedimentation, coagulation and filtration.
Colby	Municipal, shallow wells.	
Coldwater	Municipal, shallow wells.	
Columbus	Municipal, deep wells.	
Concordia	Municipal, shallow wells.	
Conway Springs	Corporate, springs.	
Cottonwood Falls	Municipal, shallow wells.	Supplied from Strong City.
Council Grove	Municipal, Neosho river.	Sedimentation, coagulation and filtration.
Courtland (1920)	Municipal, shallow wells.	

<i>City.</i>	<i>Ownership, source and treatment.</i>
Delphos	Municipal, shallow wells.
Dighton	Municipal, shallow wells.
Dodge City	Municipal, shallow wells.
Douglass	Municipal, Walnut river. Sedimentation, coagulation and filtration.
El Dorado	Municipal, Walnut river and shallow wells. Sedimentation, coagulation and filtration.
Elk City (1920)	Municipal, Elk river.
Elkhart	Municipal, shallow wells.
Ellinwood	Municipal, shallow wells.
Ellis	Municipal, shallow wells.
Ellsworth	Municipal, shallow wells.
Emporia	Municipal, Neosho river. Sedimentation, coagulation and filtration.
Englewood	Municipal, shallow wells.
Enterprise	Municipal, shallow wells.
Erie (3)	Municipal, Neosho river. Sedimentation, coagulation and filtration.
Esbon	Municipal, shallow wells.
Eureka	Municipal, Fall river. Sedimentation, coagulation and filtration.
Fort Leavenworth	Municipal, Missouri river. Supplied from Leavenworth.
Florence	Municipal, spring.
Fort Riley	Government, shallow wells.
Fort Scott	Municipal, Marmaton river.
Fowler	Municipal, shallow wells.
Frankfort	Municipal, shallow wells.
Fredonia	Municipal, Verdigris river. Sedimentation, coagulation and filtration.
Frontenac	Municipal, deep wells.
Funston	Government, shallow wells.
Galena (4)	Municipal, Shoal creek. No treatment.
Garden City	Municipal, shallow wells.
Garnett	Municipal, Cedar creek. Sedimentation, coagulation and filtration.
Gas	Municipal, Neosho river. Supplied from Iola.
Geuda Springs	Municipal, spring.
Girard	Municipal, deep wells.
Glasco	Municipal, shallow wells.
Glen Elder	Municipal, shallow wells.
Goodland	Municipal, shallow wells.
Great Bend	Corporate, shallow wells.
Green	Municipal, shallow wells.
Greenleaf	Municipal, shallow wells.
Greensburg	Municipal, shallow wells.
Halstead	Municipal, shallow wells.
Hanover	Municipal, shallow wells.
Harper	Municipal, shallow wells.
Haven (1920)	Municipal, shallow wells.
Hays	Municipal, shallow wells.
Herington	Municipal, spring. Chlorination.
Hiawatha	Municipal, spring.
Highland	Municipal, shallow wells.
Highland Park	Municipal, supplied from Topeka.
Hill City	Municipal, shallow wells.
Hoisington	Municipal, shallow wells.
Holton	Municipal, shallow wells.
Holyrood	Municipal, shallow wells.

<i>City.</i>	<i>Ownership, source and treatment.</i>
Hope	Municipal, shallow wells.
Horace	Municipal, shallow wells.
Horton	Municipal, impounding reservoir. Sedimentation, coagulation and filtration.
Hugoton (1920)	Municipal, shallow wells.
Humboldt	Municipal, Neosho river.
Hutchinson	Corporate, shallow wells. Sedimentation and coagulation.
Independence	Municipal, Verdigris river. Sedimentation, coagulation and filtration.
Inman	Municipal, shallow wells.
Iola	Municipal, Neosho river. Sedimentation and coagulation.
Jamestown	Municipal, shallow wells.
Jetmore	Municipal, shallow wells.
Jewell City	Municipal, impounding reservoir. Sedimentation, coagulation and filtration.
Junction City	Municipal, shallow wells.
Kanopolis	Municipal, shallow wells.
Kansas City	Municipal, Missouri river. Sedimentation, coagulation and filtration.
Kensington	Municipal, shallow wells.
Kingman	Municipal, springs.
Kinsley	Municipal, shallow wells.
Kiowa	Municipal, shallow wells.
Kirwin	Municipal, shallow wells.
La Crosse	Municipal, shallow wells.
La Cygne	Municipal, shallow wells.
La Harpe	Municipal, Elm creek.
Lake of the Forest	Municipal, shallow wells.
Larned	Municipal, shallow wells.
Lawrence	Municipal, Kansas river. Sedimentation, coagulation and filtration.
Leavenworth (5)	Corporate, Missouri river. Sedimentation and coagulation.
Lebanon	Municipal, shallow wells.
Lewis (1920)	Municipal, shallow wells.
Liberal	Municipal, shallow wells.
Lincoln	Municipal, shallow wells.
Lindsborg	Municipal, shallow wells.
Little River	Municipal, shallow wells.
Logan	Municipal, shallow wells.
Lucas	Municipal, shallow wells.
Luray	Municipal, shallow wells.
Lyndon	Municipal, Salt creek. Sedimentation, coagulation and filtration.
Lyons	Municipal, shallow wells.
McCracken	Municipal, shallow wells.
McCune	Municipal, shallow wells.
McPherson	Municipal, shallow wells.
Macksville	Municipal, shallow wells.
Madison	Municipal, shallow wells.
Manhattan	Municipal, shallow wells.
Mankato	Municipal, shallow wells.
Marion	Municipal, Mud creek. No treatment.
Marquette	Municipal, shallow wells.
Marysville	Corporate, Blue river. Sedimentation, coagulation and filtration.
Meade	Municipal, shallow wells.
Midian (6)	Corporate, Little Arkansas river. Filtration and sterilization.

<i>City.</i>	<i>Ownership, source and treatment.</i>
Medicine Lodge	Municipal, shallow wells.
Miltonvale	Municipal, shallow wells.
Mineral	Municipal, deep wells.
Minneapolis	Municipal, shallow wells.
Moline	Municipal, shallow wells.
Moran	Municipal, reservoir. Sedimentation, coagulation and filtration.
Mound City	Municipal, Sugar creek. Sedimentation, coagulation and filtration.
Moundridge	Municipal, shallow wells.
Mulberry	Municipal, deep wells.
Mulvane	Municipal, shallow wells.
Munden (1920)	Municipal, shallow wells.
Natoma	Municipal, shallow wells.
Neodesha	Municipal, Fall river. Sedimentation, coagulation and filtration.
Newton	Municipal, shallow wells.
Nickerson	Municipal, shallow wells.
Norton	Municipal, shallow wells.
Oakland	Supplied from Topeka.
Oakley	Municipal, shallow wells.
Oberlin	Municipal, shallow wells.
Oil Hill (7)	Corporate, Little Arkansas river.
Olathe	Municipal, Cedar creek. Sedimentation, coagulation and filtration.
Onaga	Municipal, shallow wells.
Osage City	Municipal, impounding reservoir. Sedimentation, coagulation and filtration.
Osawatomie	Municipal, Marais des Cygnes river. Sedimentation, coagulation and filtration.
Osborne	Municipal, shallow wells.
Oskaloosa	Municipal, spring.
Oswego	Municipal, Neosho river. Sedimentation, coagulation and filtration.
Ottawa	Municipal, Marais des Cygnes river. Sedimentation and coagulation.
Oxford	Municipal, shallow wells.
Paola	Municipal, Bull creek. Sedimentation, coagulation and filtration.
Parsons	Corporate, La Bette creek. Sedimentation, coagulation and filtration.
Peabody	Municipal, shallow wells.
Peru	Municipal, shallow wells.
Phillipsburg	Municipal, shallow wells.
Pittsburg	Municipal, deep wells.
Plainville	Municipal, shallow wells.
Pleasanton	Municipal, impounding reservoir.
Potwin (1920)	Municipal, shallow wells.
Pratt	Municipal, shallow wells.
Preston (1920)	Municipal, shallow wells.
Pretty Prairie (1920)	Municipal, shallow wells.
Protection	Municipal, shallow wells.
Rosedale	Municipal, Missouri river. Supplied from Kansas City, Mo.
Russell	Municipal, impounding reservoir.
Sabetha	Municipal, shallow wells.
St. Francis	Municipal, shallow wells.
St. John	Municipal, shallow wells.
St. Marys	Municipal, shallow wells.
Salina	Corporate, shallow wells.
Scammon	Municipal, shallow wells.

<i>City.</i>	<i>Ownership, source and treatment.</i>
Scandia	Municipal, shallow wells.
Scott City	Municipal, shallow wells.
Sedan	Municipal, Caney river. No treatment.
Sedgwick	Municipal, shallow wells.
Seneca	Municipal, shallow wells.
Sharon Springs	Municipal, shallow wells.
Simpson	Municipal, shallow wells.
Smith Center	Municipal, shallow wells.
Solomon (1920)	Municipal, shallow wells.
Spearville	Municipal, shallow wells.
Stafford	Municipal, shallow wells.
Sterling	Municipal, shallow wells.
Stockton	Municipal, shallow wells.
Strong City	Municipal, shallow wells.
Sylvan Grove	Municipal, shallow wells.
Syracuse	Municipal, shallow wells.
Tescott	Municipal, shallow wells.
Tonganoxie	Municipal, shallow wells.
Topeka	Municipal, shallow wells.
Towanda	Municipal, shallow wells.
Turon	Municipal, shallow wells.
Udall	Municipal, shallow wells.
Utica (1920)	Municipal, shallow wells.
Valley Center	Municipal, shallow wells.
Valley Falls	Municipal, spring.
Wa Keeney	Municipal, shallow wells.
Wakefield	Municipal, shallow wells.
Wamego	Municipal, shallow wells.
Washington	Municipal, Mill creek. Sedimentation, coagulation and filtration.
Waterville	Municipal, shallow wells.
Waverly	Municipal, shallow wells.
Weir City	Corporate, deep wells.
Wellington	Municipal, shallow wells.
West Plains	Municipal, shallow wells.
Westmoreland	Municipal, shallow wells.
Wichita	Corporate, shallow wells.
Wilson	Municipal, shallow wells.
Winfield	Municipal, shallow wells.
Yates Center	Corporate, impounding reservoir. No treatment.

NOTES:

- (1) Municipal plant has been constructed during 1919-'20.
- (2) Well water is treated for deferrization.
- (3) Supply will be changed to Neosho river with adequate treatment during 1920.
- (4) Deep wells under construction, 1920.
- (5) Also supplies Fort Leavenworth.
- (6), (7) Midian and Oil Hill are industrial towns of a more or less temporary nature, established by the Empire Gas and Fuel Company.

It is probable that the preliminary work done in connection with the sixteen or eighteen plants contemplated, but which are not yet under way, will not have been wasted, since there seems to be an unusual activity among the municipalities toward the construction of improvements of this type. Extensions, additions and improvements to existing water-works plants for which applications have been made to the board, and plans and specifications have been approved by this department, have been made during the year to the number of 51. These are included in the following list:

NEW PLANTS AND IMPROVEMENTS TO WATER SUPPLIES DURING 1920.

- ARKANSAS CITY.** Construction of covered storage reservoir.
- AUGUSTA.** Extensive investigations for a new water supply.
- ARCADIA.** New plant.
- BAXTER SPRINGS.** Construction of a new municipal water supply in addition to the present corporate plant.
- BURNS.** New plant.
- BURR OAK.** Drainage of pool near present well and repairing of well.
- CALDWELL.** Substitution of new well water supply for the old surface supply.
- CANEY.** Further investigations for ground water.
- CANTON.** New plant.
- CHERRYVALE.** Construction of impounding dam in Verdigris river.
- CIMARRON.** Construction of new wells, new pumping station and new steel elevated tank.
- COUNCIL GROVE.** Construction of temporary emergency well.
- COURTLAND.** New plant.
- EL DORADO.** Extensive investigations for a new water supply.
- ELK CITY.** New plant.
- ELKHART.** Construction of additional wells.
- ENGLEWOOD.** Construction of additional wells.
- ENTERPRISE.** Construction of additional wells.
- ERIE.** Construction of water-purification plant and new supply from Neosho river. Abandonment of present well supply.
- ESBON.** Repairs and improvements to existing well.
- EUREKA.** Substitution of emergency surface water supply for the approved supply from Fall river.
- FLORENCE.** Development of a new supply from spring to be substituted for present supply from Cottonwood river.
- FORT SCOTT.** Construction of large impounding reservoir and an additional impounding dam on the Marmaton river.
- GALENA.** Construction of two deep wells to be substituted for present supply from Shoal creek.
- GOODLAND.** Construction of two additional deep wells.
- GREENLEAF.** Investigations for additional water supply.
- HAVEN.** New plant.
- HUGOTON.** New plant.
- JEWELL.** Substitution of emergency temporary well for present impounding reservoir.
- LA CYGNE.** Construction of water-purification plant and supply from Marais des Cygnes river, substituted for present well water supply.
- LAWRENCE.** Substitution of Kansas river for well water.
- LEWIS.** New plant.
- LYNDON.** Temporary emergency use of Salt creek water from new point.
- MADISON.** Extensive investigations for new water supply.
- MANHATTAN.** Investigations looking toward iron removal and softening.
- MUNDEN.** New plant.
- NEODESHA.** Construction of new dam in Fall river.
- OLATHE.** Steps taken toward raising the present dam on Cedar creek.
- OSAWATOMIE.** Additions and extensions to present water-purification plant.
- OSBORNE.** Construction of new wells.
- OSWEGO.** Construction of new wells and intake in Neosho river.

OTTAWA. Installation of liquid chlorine for disinfection.
PAOLA. Construction of new water-purification plant.
PEABODY. Extensive investigations for new water supply.
POTWIN. New plant.
PRESTON. New plant.
PRETTY PRAIRIE. New plant.
SHARON SPRINGS. Construction of new wells.
SOLOMON. New plant.
TOPEKA. Extensive investigations for new water supply.
UTICA. New plant.

OPERATION OF WATERWORKS PLANTS.

The operation, particularly of water-purification plants, has also been hard hit by the spirit of unrest which seems to prevail. Many well-qualified operators in charge of plants of this type have resigned their positions during the past year to enter other lines of work or to accept more lucrative employment. As a result several of our most important water-purification plants at the present time are in charge of men who are not experienced or qualified. The operating data and the bacteriological analyses of the samples which are sent in each week from the surface water supplies show, on the whole, rather disappointing results in the matter of purification. It would seem desirable that some arrangement be made whereby men who are to be engaged in the operation of plants of this character could receive training of a more thorough sort than has been the custom in the past—in a way similar to that which was attempted a few years ago by this department in the establishment of a short course at the University. This method is being followed at the present time by the state board of health in Texas, and in the state of New Jersey operators of water-purification and sewage-treatment plants must be licensed by the state board of health.

Chart No. 1 shows the number of *B. coli* per 100 cubic centimeters for each of the surface water supplies in the state each week during the year, calculated from the bacteriological analyses made in this laboratory. It also shows the periods during which no samples were received from the various plants. This chart is in blueprint form and may be obtained upon request to the Division of Water and Sewage, Lawrence.

From an inspection of this chart it is apparent that no surface water supply is of satisfactory quality at all times, but that the greater number of them supply an acceptable water most of the time. It is our aim, of course, to secure such operation that the water will be of good quality at all times. This is more difficult of attainment than would be supposed, on account of the fact that the proper operation of the water-purification plants at some of these cities is not given the important consideration which it deserves, the regulations of the State Board of Health and the efforts of this department notwithstanding.

Since under the state law it is required that sources of supply and methods of treatment and storage must be acceptable to the State Board of Health, it is believed that the regulations should go one step farther and cover the just as important point that the man who operates the

purification process must also be acceptable to this Board, and must demonstrate his knowledge of the plant and his ability to handle it. In a number of cities the officials seem to be anxious to coöperate with us to the fullest extent, and some of the men in charge of the waterworks plants have been secured upon our recommendation, but I regret to say that in others they seem to be antagonistic to any outside interference. It is believed that with but a few exceptions these water-purification plants, practically all of which now have been designed and constructed under the approval of this division within the past twelve or fourteen years, are capable of doing the work for which they are intended, and it is only necessary that careful and intelligent operation be provided them in order to secure a safe and acceptable water at all times.

EXEMPTION OF CERTAIN CITY WATER SUPPLIES FROM INSPECTION.

As provided for in the resolution adopted by the State Board of Health at its last meeting, the small cities of Green and Horace have been exempted from paying the \$12.50 fee for the inspection and analysis of their water supply and have been advised that it is only necessary for them to send in two samples of water each year for bacteriological analysis, the examinations to be paid for at the rate of \$2.50 each. It is probable that recommendations will be made in the near future that certain others of the small towns with waterworks plants be included in this list.

LAWRENCE SOFTENING PLANT.

It is deemed of sufficient importance to show the results of the operation of the first municipal softening plant to be installed in this state—that of the city of Lawrence, which was completed in May, 1919.

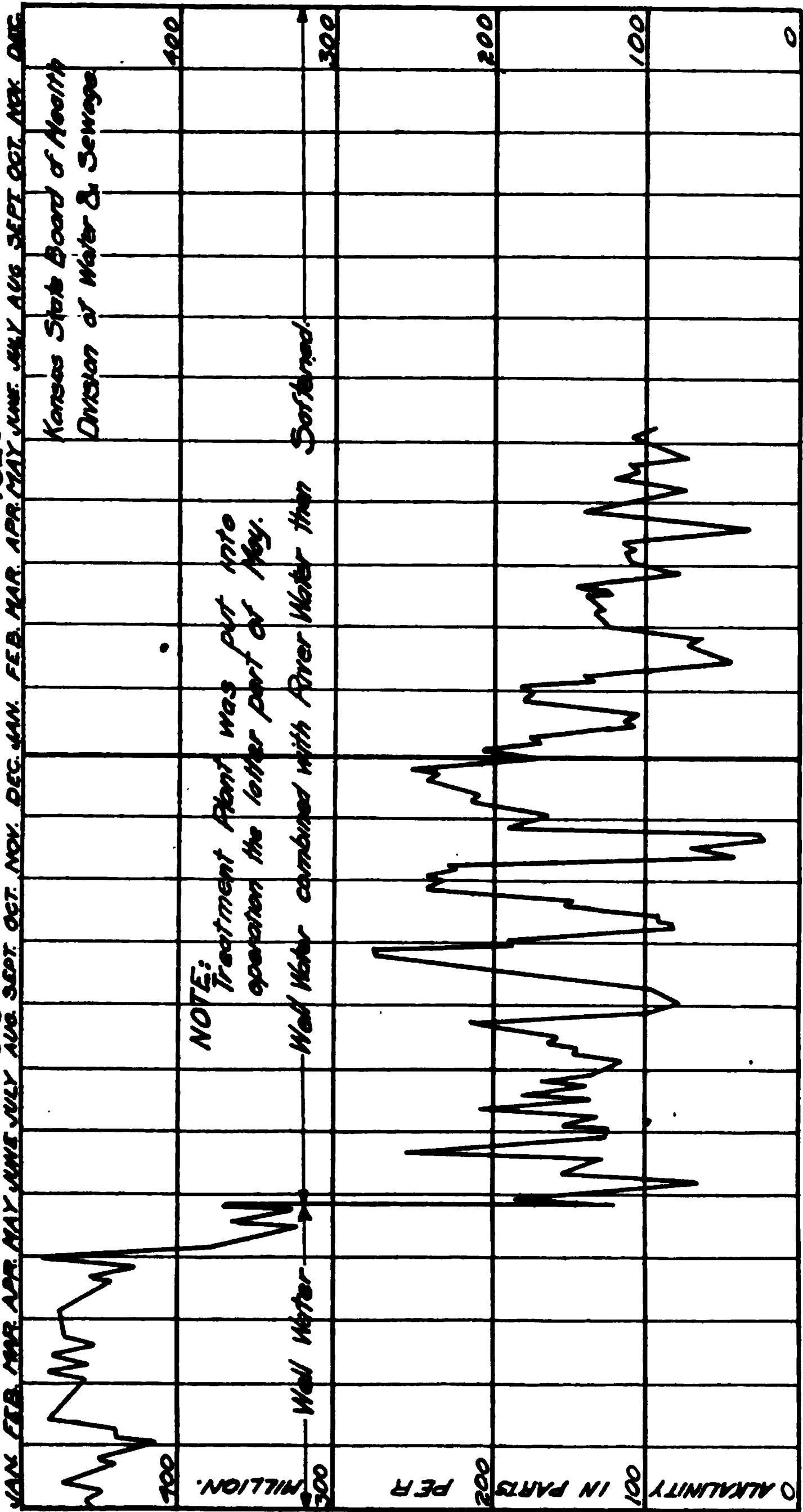
The waterworks system was purchased by the city from the private company after years of inefficient management and poor service. After a campaign instituted by the State Board of Health arrangements were made for the treatment of the supply and for generous extensions to the pumping plant and distribution system immediately following its purchase. In connection with the treatment for the removal of the iron, which occurs in the ground waters of the Kansas river valley, provision for softening the water was made. Shortly after the plant was placed in operation it was found that the ground water had increased in hardness approximately 150 parts per million, to a total of 600 parts per million, of bicarbonate alkalinity over that determined during a special study of water softening and iron removal conducted jointly by the laboratory of this division and the Division of State Chemical Research of the University, in 1914. This fact, coupled with the increasing difficulty of securing a sufficient quantity of ground water from the wells, due, we believe, to the continuance of the several years of extremely dry weather which had been experienced, resulted in the granting of permission by the State Board of Health to the city to take water temporarily from the Kansas river directly, and the abandonment in a large measure of their well water supply. The water from the river, of course, is considerably

CHART No. 2.

CHART SHOWING ALKALINITY OF LAWRENCE CITY WATER

1919

1920



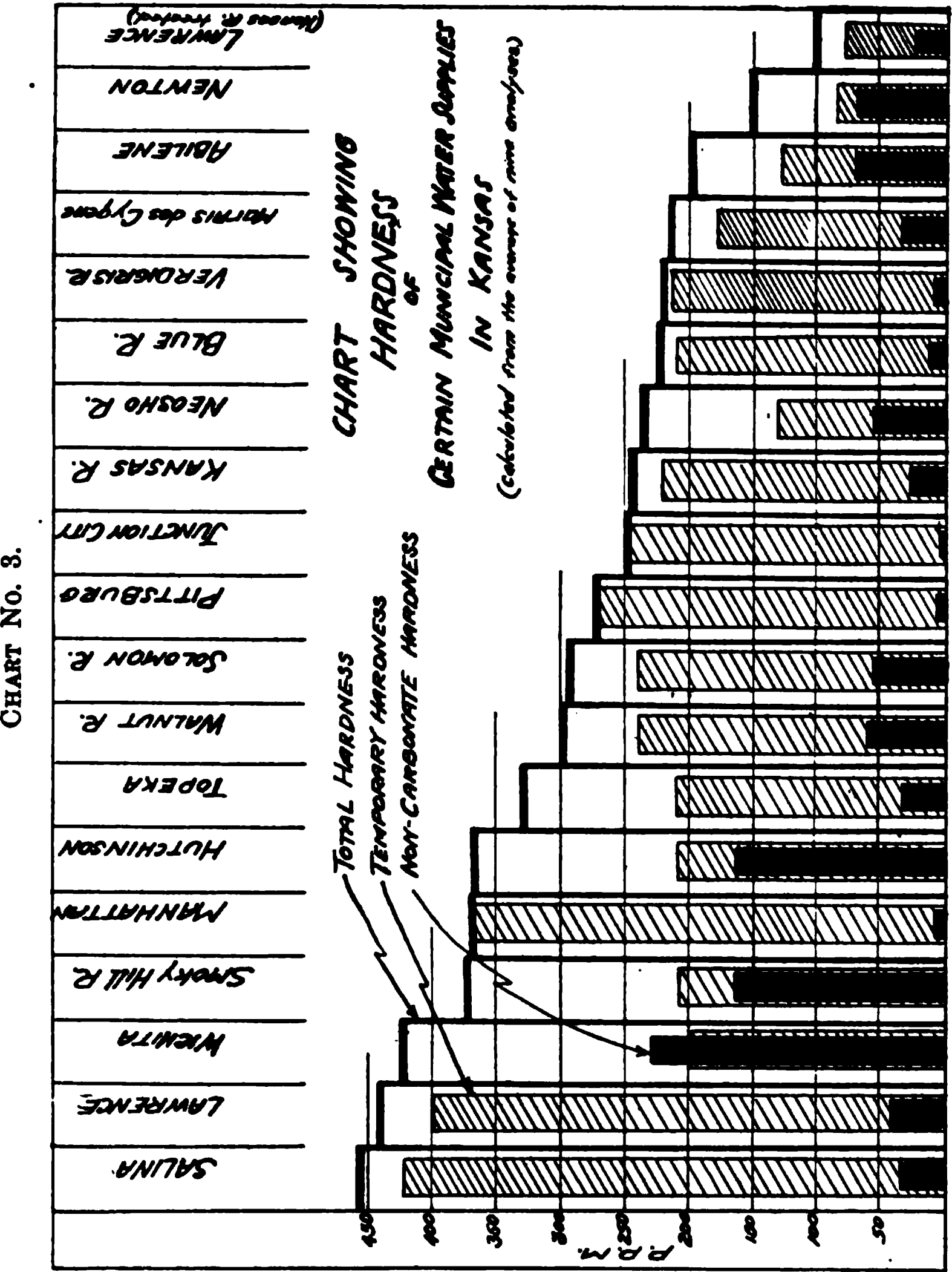
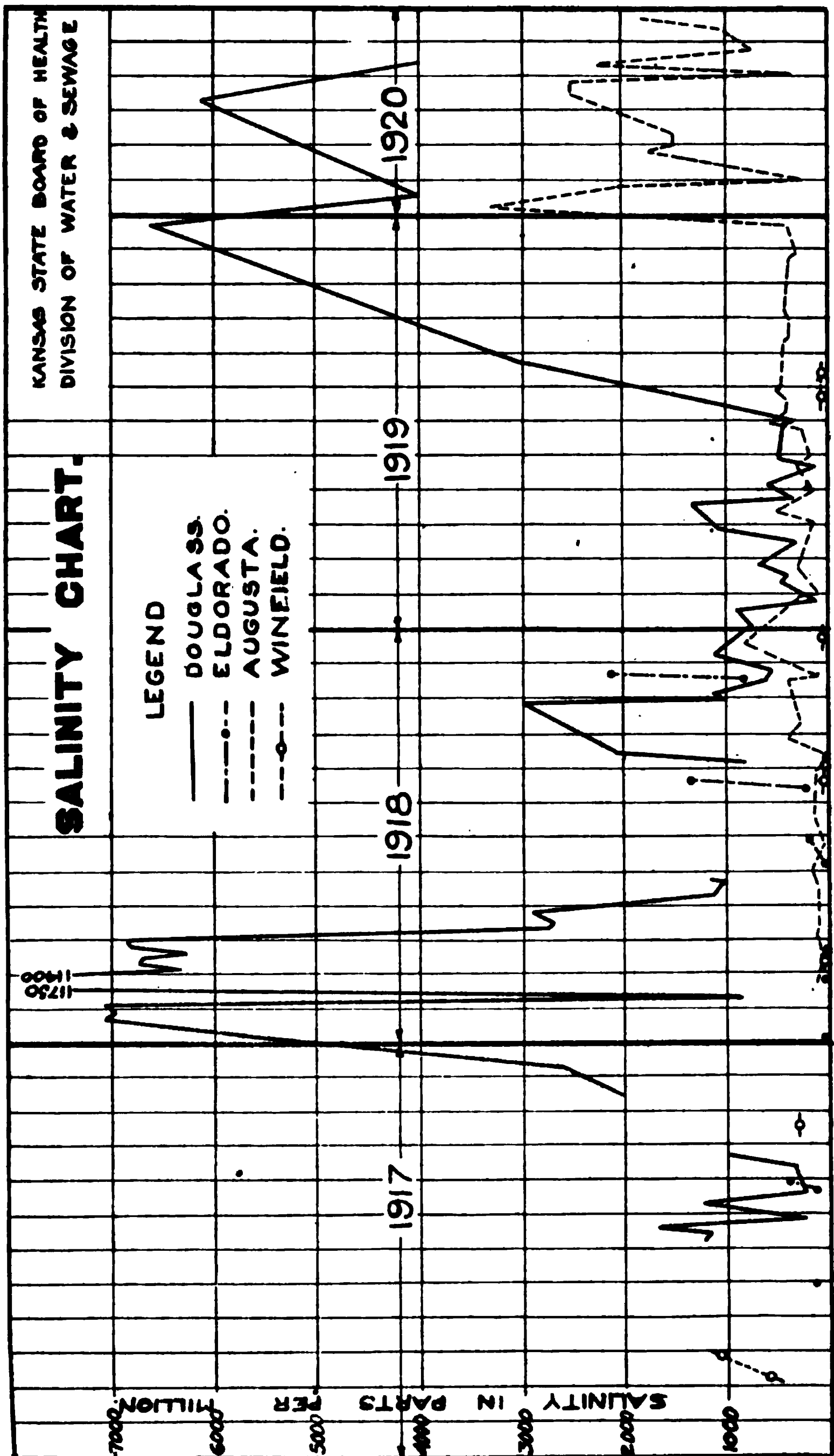
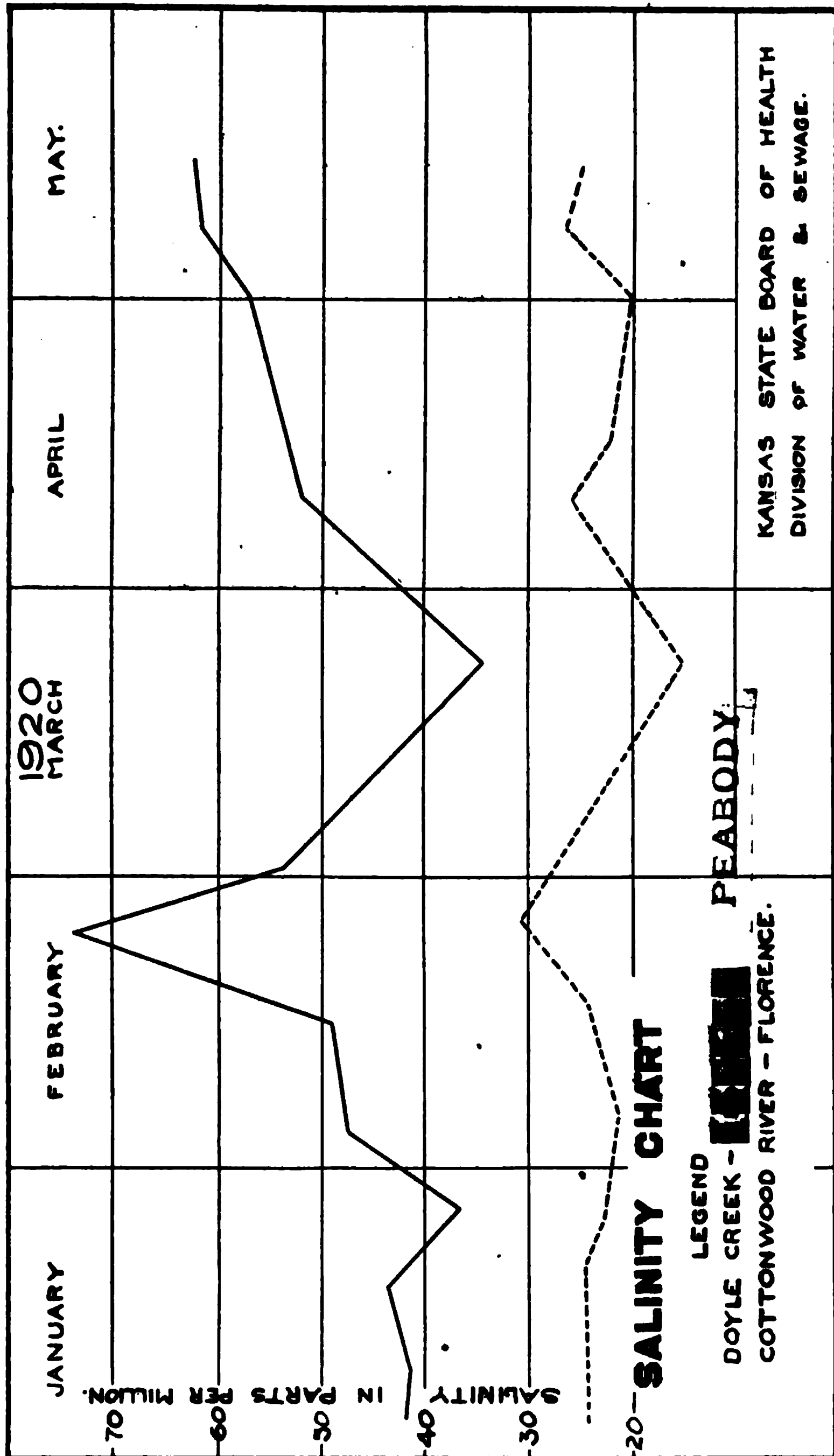


Chart 3 shows the hardness of the water supplies of the principal cities of the state in the order of their magnitude, including both temporary and the permanent hardness. This chart also shows the average alkalinity of the softened water at Lawrence since January 1, 1920.

CHART No. 4.





softer than that from the well, and a great saving has been effected to the city in the reduction of the quantity of lime necessary to soften.

Chart 2 shows the results of the daily determinations of the alkalinity of the tap water as calcium carbonate in parts per million from January 1, 1919, to date. While the results at first glance seem to vary greatly, it will be noticed that since January 1, 1920, the hardness of this supply has at no time been excessive and the average is considerably below that of the softest ground water supply in the state. The substitution of this soft water in the city has resulted in an enormous economic saving. The softening plant as designed is able to treat satisfactorily the river water. Needless to say, the citizens of Lawrence are highly pleased with the new plant.

SEWERAGE.

During the past year fifteen new sewer systems have been completed or are under construction at the present time, and no less than ten have been contemplated and have required more or less work from this department, but have as yet not reached beyond the proposed state.

The following table includes a new list of all the sewer systems in the state at the present time. Those constructed during the past year are indicated by the date 1920 following.

LIST OF SEWERAGE SYSTEMS IN KANSAS, WITH RECEIVING STREAMS AND METHODS OF DISPOSAL.

<i>City.</i>	<i>Sewage discharges, and treatment or disposal.</i>
Abilene	Smoky Hill river. Dilution.
Anthony	Spring creek. Imhoff tank and contact beds.
Arkansas City	Arkansas river. Dilution.
Army City	Kansas river. Dilution.
Ashland (1920)	Bear creek. Imhoff tank; sand filter.
Atchison	Missouri river. Dilution.
Augusta	Walnut river. Imhoff tank and contact beds.
Baldwin	Dry runs leading to Marais des Cygnes river. Septic tanks and contact beds.
Baxter Springs	Spring river. Dilution.
Belleville	Dry creek. Imhoff tank; sand filter.
Belle Plaine (1920)	Ninnescah river. Dilution.
Beloit	Solomon river. Dilution.
Bonner Springs	Kansas river. Dilution.
Burlingame	Switzler creek. Imhoff tank and contact beds.
Burlington	Neosho river. Septic tank.
Caldwell	Fall creek. Septic tank.
Caney	Cana creek. Dilution.
Chanute	Neosho river. Septic tank.
Chapman (1920)	Smoky Hill river. Dilution.
Cheney (1920)	Ninnescah river. Dilution.
Cherryvale	Drum creek. Septic tank and contact beds.
Chetopa	Neosho river. Dilution.
Clay Center	Republican river. Dilution.
Clyde	Republican river. Septic tank.
Coffeyville	Two outfalls on Verdigris river and one on Onion creek. Septic tanks; three plants.
Colby (1920)	Prairie Dog creek. Imhoff tank; sand filters.
Coldwater (1920)	Cavalry creek. Imhoff tank; sand filters.

<i>City.</i>	<i>Sewage discharges, and treatment or disposal.</i>
Columbus	Brush creek. Septic tank; and contact beds; two plants.
Concordia	Republican river. Dilution.
Cottonwood Falls (1920)	Cottonwood river. Imhoff tank; trickling filters.
Council Grove	Neosho river. Imhoff tank and contact beds.
Dodge City	Arkansas river. Dilution.
Douglass	Walnut river. Dilution.
Downs	North fork of Solomon river. Septic tank.
El Dorado	Walnut river. Septic tank disinfection.
Ellis	Big creek. Septic tank and contact beds.
Ellsworth	Smoky Hill river. Dilution.
Emporia	Cottonwood river. Dilution. Sewage-treatment plant authorized.
Enterprise (1920)	Smoky Hill river. Dilution.
Erie	Fall river. Septic tank.
Eureka	Fall river. Septic tank.
Fort Scott	Marmaton river. Septic tank.
Florence (1920)	Doyle creek. Imhoff tank.
Frankfort	Black Vermillion river. Dilution.
Fredonia	Salt creek. Septic tank.
Funston (Camp)	Kansas river. Dilution.
Galena	Short creek. Dilution.
Garden City	Arkansas river. Dilution.
Garnett	Dry ravines leading to Pottawatomie creek. Two plants; septic tanks and contact beds.
Geuda Springs	Arkansas river. Dilution.
Girard	Cow creek. Septic tank and contact beds.
Glasco	Solomon river. Dilution.
Goodland	Sappa creek. Imhoff tank; sand filters.
Great Bend	Walnut creek. Septic tank.
Halstead	Little Arkansas river. Septic tank and contact beds.
Hanover (1920)	Little Blue river. Dilution.
Harper	Bluff creek. Septic tank and contact beds.
Hays City	Big creek. Septic tank.
Herington	Lime creek. Septic tank.
Hiawatha	Wolf creek. Imhoff tank; sand filter.
Holsington	Cheyenne bottoms. Septic tank.
Holton	Elk Creek. Septic tank and contact beds.
Horton	Cedar creek. Septic tank and contact beds.
Humboldt	Neosho river. Septic tank.
Hutchinson	Arkansas river. Mechanical screens, three-eighths slats.
Independence	One-third Rock creek, two-thirds Verdigris river. One-third septic tank and contact beds, two-thirds dilution.
Iola	Elm creek. Septic tank.
Junction City	Smoky Hill river. Dilution.
Kansas City	Kansas river. Dilution.
Kingman	Ninnescah river. Dilution.
Kinsley	Arkansas river. Dilution.
Lake of the Forest	Kansas river. Dilution.
Larned	Arkansas river. Dilution.
Lawrence	Kansas river. Dilution.
Leavenworth	Missouri river. Dilution.
Leavenworth (Fort)	Missouri river. Dilution.
Liberal	Dry Lake. Septic tank and sand filters.
Lincoln	Saline river. Septic tank.
Lindsborg	Smoky Hill river. Dilution.
Lyndon	Salt creek. Septic tank and contact beds.

<i>City.</i>	<i>Sewage discharges, and treatment or disposal.</i>
McPherson	Turkey creek. Septic tank, Imhoff tank and sand filter.
Manhattan	Blue river. Dilution.
Marion	Cottonwood river. Septic tank.
Marquette	Smoky Hill river. Dilution.
Marysville	Blue river. Dilution.
Minneapolis	Solomon river. Dilution.
Mulvane	Arkansas river. Dilution.
Neodesha	Verdigris river. Imhoff tank; sprinkling filter.
Newton	Sand creek. Septic tank.
Nickerson	Arkansas river. Dilution.
Norton	Prairie Dog creek. Septic tank and contact beds.
Ogden	Kansas river. Dilution.
Olathe	Mill creek (dry). Dilution.
Osage City	Salt creek. Septic tank and contact beds.
Osawatomie	Pottawatomie creek. Dilution.
Osborn	Solomon river. Septic tank.
Oswego	One-third Dry creek, two-thirds Neosho river. One-third septic tank and contact beds, two-thirds dilution.
Ottawa	Marais des Cygnes river. Dilution.
Paola	Bull creek. Dilution.
Parsons	Little Labette creek. Two septic tanks.
Peabody	Doyle creek. Septic tank.
Pittsburg	Cow creek. Dilution.
Potwin (1920)	Walnut river. Imhoff tank; sand filters.
Pratt	Ninnescah river. Septic tank.
Protection (1920)	East creek. Coarse screens and sand filters.
Riley (Fort)	Kansas river. Dilution.
Rosedale	Turkey creek. Dilution.
Sabetha	Cedar creek. Two plants; septic tank and contact beds.
St. John	Rattle Snake creek. Septic tank.
Salina	Smoky Hill river. Dilution.
Sedan	Cana river. Imhoff tank; sand filters.
Scott City (1920)	Dry run. Imhoff tank; sand filters.
Sedgwick (1920)	Little Arkansas river. Imhoff tank; sand filters.
Seneca	Nemaha river. Septic tank and contact beds.
Smith Center (1920)	Dry run. Imhoff tank; sand filters.
Stafford	Ninnescah river. Septic tank and contact beds.
Syracuse	Arkansas river. Dilution.
Topeka	Kansas river. Dilution.
Towanda	White Water creek. Dilution.
Valley Falls	Delaware river. Imhoff tank.
Wamego	Kansas river. Dilution.
Washington	Mill creek. Septic tank.
Wellington	State creek.
Wichita	Arkansas river. Dilution.
Winfield	Walnut river. Dilution.
Yates Center	Ravine to Owl creek. Septic tank and contact beds.

STATE INSTITUTIONS.*

Atchison—State Orphanage	Missouri river. Dilution.
Dodge City—Soldiers' Home	Arkansas river. Dilution.
Lansing—State Prison	Missouri river. Dilution.
Larned—State Hospital	Pawnee creek. Dilution.
Norton—State Hospital	Prairie Dog creek. Septic tank; sand filters.

* Only those state institutions are shown which have separate sewer outlets from the cities in which they are situated.

<i>City.</i>	<i>Sewage discharges, and treatment or disposal.</i>
Osawatomie—State Hospital	Marais des Cygnes river. Dilution.
Topeka—State Hospital	Kansas river. Dilution.
Topeka—State Industrial Institute, Soldier creek.	Dilution.
Winfield—State Hospital	Dutch creek. Imhoff tank; sand filters.

It is probable that the preliminary work done in connection with the systems contemplated, but which are not yet under way, will not have been wasted, since there seems to be an unusual activity among the municipalities toward the construction of improvements of this type. Extensions, additions and improvements to existing sewer systems, for which applications have been made to the board and plans and specifications have been approved by this department, have been made during the year to the number of 40. These are included in the following list:

- ABILENE. Extensions to sewer system.
- ASHLAND. New sewer system and sewage-treatment plant.
- AUGUSTA. Extensions to sewer system.
- BAXTER SPRINGS. Extensions to sewer system.
- BELLE PLAINE. New sewer system.
- CEDARVALE. Plans approved but system not constructed.
- CHAPMAN. New sewer system.
- CHENEY. New sewer system.
- COLBY. New sewer system and sewage-treatment plant.
- COLDWATER. New sewer system.
- CONCORDIA. Extensions to sewer system.
- DODGE CITY. Extensions to sewer system.
- COTTONWOOD FALLS. New sewer system and sewage-treatment plant.
- DOUGLASS. Sewer system completed.
- EL DORADO. Extensions to sewer system and plans approved for new sewage-treatment plant.
- EMPORIA. Extensions to sewer system and plans under way for new sewage-treatment plant.
- ENTERPRISE. New sewer system.
- FLORENCE. New sewer system and sewage-treatment plant.
- GLASCO. Extensions to sewer system.
- GOODLAND. New sewer system and sewage-treatment plant.
- HANOVER. New sewer system.
- HARPER. Extensions to sewer system.
- HUTCHINSON. Extensions to sewer system.
- INDEPENDENCE. Extensions to sewer system.
- KINSLEY. Extensions to sewer system.
- MADISON. Plans prepared but system not constructed.
- MANHATTAN. Extensions to sewer system.
- MARYSVILLE. Extensions to sewer system.
- NEODESHA. Extensions to sewer system.
- NEWTON. Construction of new sewage-treatment plant.
- PEABODY. Extensions to sewer system.
- POTWIN. New sewer system and sewage-treatment plant.
- PROTECTION. New sewer system and sewage-treatment plant.
- SALINA. Extensions to sewer system.
- SCOTT CITY. New sewer system and sewage-treatment plant.
- SEDGWICK. New sewer system and sewage-treatment plant.
- SMITH CENTER. New sewer system and sewage-treatment plant.
- WAMEGO. Extensions to sewer system.
- WICHITA. Extensions to sewer system.

OPERATION OF SEWAGE-TREATMENT PLANTS.

The operation of sewage-treatment plants has not been under the same careful degree of supervision by this department during the past year as it has been for a number of years on account of the lack of help.

It was necessary to curtail a portion of the work, and it was believed that this could most properly be done.

Unfortunately, even though the legislature of 1919 authorized cities to levy a tax for the maintenance of sewage-treatment plants, it is only with the greatest of difficulty that we are able to convince many city officials that money so expended is money well spent. On the other hand, a considerable number of cities maintain their plants in excellent condition.

INSPECTION OF NEW SEWER SYSTEMS.

Under the regulations of the State Board of Health it has been made one of the conditions of the permit for the discharge of sewage into the waters of the state that all new construction work conducted under the permit be inspected by a representative of this department before its acceptance by the city. It is believed that a considerable amount of work of unsatisfactory character had been installed in the past several years by incapable or unscrupulous contractors, and in some cases engineers. The adoption of this feature, however, has resulted in many instances in a much higher grade of work through the knowledge by both engineers and contractors of the fact that their work must be constructed in accordance with the plans and specifications approved by this department before it can be accepted by the city and that all defects must be remedied.

PLUMBING BILL.

As reported last year, this division was asked in January, 1919, by the Association of Master Plumbers to formulate a plumbing act and to supervise the installation of all plumbing in this state by the establishment of a section of plumbing inspection. Since the organization of this department was inadequate for work of this character, a bill was drawn up which provided for the personnel and the necessary funds and presented to the 1919 legislature. This bill failed to pass, however, and this year the same request has been repeated. The writer appeared before the convention of the Master Plumbers Association and was met with a very cordial reception. The matter was thoroughly discussed and the necessity and desirability of such an arrangement was clearly brought out. At the present time cities with population in excess of 6,000 may establish a plumbing inspection department, adopt regulations and enforce them under the laws of the state, while those of less than 6,000 have no authority to regulate the work in any manner. It is interesting to note that at the present date there are 24 sewer systems serving a population of 399,743 in cities larger than 6,000 by the 1910 United States Census, and 97 sewer systems in cities of less than 6,000, with a combined population of 197,789. Kansas City, Wichita and Topeka are not included in these figures. It is hoped that plans may be satisfactorily worked out whereby all cities with sewer systems, irrespective of their population, may be given adequate protection. The control of the installation of sanitary plumbing is an important point in the handling of the entire problem of sewage disposal.

LABORATORY.

The customary amount of work has been carried on in the laboratory of this division, which was placed under the direction of the chief engineer of the Board in 1919.

The following table shows the total number and the character of the analyses made in the laboratory during the past year:

ANALYSES COMPLETED IN THE WATER AND SEWAGE LABORATORY,
JUNE 1, 1919, TO JUNE 1, 1920.

Month	Bact.	Chem.	Miscel.
1919—June	495	57	4
July	661	68	42
August	579	38	2
Sept.	481	29	2
Oct.	444	46	41
Nov.	484	19	10
Dec.	224	6	4
1920—Jan.	393	21	13
Feb.	855	34	4
March	404	40	18
April	588	54	3
May	391	24	5
Totals	5,399	431	148—4,978

NOTE.—Miscellaneous analyses consist principally of examination of chlorides to determine effect of oil development on streams; sands for use in water-purification and sewage-treatment plants; strength of chemicals used at water-purification plants; microscopical analyses.

A great amount of assistance has been furnished this department during the past year by the inspection of sources of natural ice and of manufacturing plants, carried on by the inspectors of the Food and Drug Division. Representatives of the Engineering Division have also made a large number of such inspections, and it is believed that the work in general has assisted in materially improving the quality of these supplies.

The concerns to which licenses have been granted for the sale of ice for the past two years and bottled water and railway supplies for the last year, with their dates, are contained in the following table. This information is also published and kept up to date in the monthly *Bulletin*. It is believed that the greater the publicity given to this work the more effective it will become.

DEALERS IN MANUFACTURED ICE.

KEY TO REFERENCE MARKS.

- * Fee paid but sample of ice not received, or first sample unsatisfactory and waiting for check.
- † Fee unpaid and sample of ice not in.
- ‡ Suit; paid. § License refused. ——— Not in business.

		Licensed, 1919. Mo. Da.	Licensed, 1920. Mo. Da.
Abilene	Belle Springs Creamery Co	2 3	*.....
Alma	Alma Light & Ice Co.....	6 28	†.....
Anthony	Anthony Salt Company	2 25	2 17
Argentine	Railways Ice Co.....	7 13	†.....
Arkansas City	Arkansas City Ice & C. S. Co.....	4 8	5 6
Arkansas City	Henneberry & Co.	2 21	3 8
Ashland	Ashland Ice & C. S. Co.....	*.....	†.....
Atchison	Crystal Ice & Fuel Co.....	4 8	†.....

		Licensed, 1919. Mo. Da.		Licensed, 1920. Mo. Da.	
Atchison	Home Ice & C. S. Co.	5	7	5	6
Augusta	Augusta Ice Co.	7	14	†	.....
Baldwin	Thudium & Cooper			5	29
Belleville	Belleville Ice & C. S. Co.	*	.....	†	.....
Blue Rapids	Blue Rapids Ice & C. S. Co.	7	18	4	22
Bonner Springs	Bonner Elec. & Mfg. Co.	8	11	†	.....
Buhler	Farmers Ice & Produce Co.	2	18	8	18
Burden	W. A. Bowden	8	11	†	.....
Burlingame	Burlingame Ice Co.	†	.....	†	.....
Burlington	Burlington Light, P. & Mfg. Co.	*	.....	†	.....
Burr Oak	Jewell County Farmers' U. C. Assn.	*	.....	*	.....
Bushton	City Meat and Ice Market	7	31	†	.....
Caldwell	Caldwell Crystal Ice & C. S. Co.	7	28	*	.....
Caney	Caney Ice & C. S. Co.	6	28	*	.....
Canton	Miller & Griswold	7	1	*	.....
Chanute	Chanute Ice & Light Co.	5	15	*	.....
Chapman	Hassler & Leatherman	2	8	*	.....
Cherryvale	Cherryvale Ice & C. S. Co.	2	8	2	17
Chanute	Consumers Ice Co.	12	9	†	.....
Chetopa	Chetopa Ice & Bottling Works	10	18	*	.....
Coffeyville	Shepard & Chain Ice Co.	9	2	*	.....
Columbus	Columbus Ice Co.	6	12	†	.....
Concordia	Concordia Ice & C. S. Co.	2	18	2	17
Conway Springs	Frantz Ice Co.	7	31	*	.....
Cottonwood Falls	Home Light & Power Co.	2	8	2	17
Council Grove	Morris County Light & Power Co.	5	7	*	.....
Detroit	Chas. C. Selby	*	.....	†	.....
Dodge City	Midland Light & Ice Co.	8	21	8	18
Douglass	Harris & Son	†	.....	†	.....
Downs	Artificial Ice Company	8	12	*	.....
El Dorado	El Dorado Elec. & Refrig. Co.	9	2	*	.....
Ellsworth	Weber Elec. Power Co.	6	28	*	.....
Emporia	Emporia Ice & C. S. Co.	8	12	8	29
Erie	Crystal Ice & Bottling Co.	7	14	†	.....
Eudora	Henry Hagenbuch & Son	7	28	†	.....
Eureka	Eureka Elec. & Ice Co.	7	28	†	.....
Fort Scott	Fort Scott Ice Mfg. Co.	7	28	*	.....
Fort Scott	O'Connor & Hamlin	2	18	*	.....
Frankfort	Frankfort Ice & Storage Co.	*	.....	†	.....
Fredonia	Fredonia Ice & Light Co.	5	7	8	8
Frontenac	Menghini Bros.	5	7		.....
Galena	Union Ice & Fuel Co.	7	1	†	.....
Garden City	Garden City Ice Co.	7	14	*	.....
Gardner	J. B. Todd			*	.....
Goodland	Goodland Ice & Coal Co.	5	15	†	.....
Great Bend	Great Bend Ice, Fuel & St. Co.	*	.....	†	.....
Greensburg	S. B. Dunlap	*	.....		.....
Harper	Crystal Ice Co.	5	7	†	.....
Haven	Haven Light & Ice Co.	6	12	5	22
Haviland	City Meat Market	*	.....	†	.....
Hays	Felton Pure Ice Co.	5	7	8	18
Herington	Herington Ice Co.	6	12	*	.....
Hesston	Hesston Creamery & Ice Co.	9	10	†	.....
Hiawatha	Hiawatha Light & Power Co.	6	12	*	.....
Highland	Charles B. Hughes	11	19	*	.....
Holton	Peoples Ice & St. Co.	10	9	†	.....
Hope	Hope Condensed Milk Co.			*	.....
Humboldt	Humboldt Ice Company	6	18	†	.....

		Licensed, 1919. Mo. Da.		Licensed, 1920. Mo. Da.	
Hutchinson	Carey Salt Co.	10	9	*	.....
Hutchinson	Hutchinson Ice Co.	2	18	†	.....
Independence	Crystal Ice & Fuel Co.	*	.....	†	.....
Iola	Iola Ice & C. S. Co.	2	18	5	27
Jetmore	M. W. Peterson	*	.....	†	.....
Junction City	Union Light & Power Co.	8	12	2	17
Kansas City	Alpine Ice Co.	5	15	†	.....
Kansas City	Armour & Company	2	25	2	17
Kansas City	Crystal Spgs. Ice Gr. & Fuel Co.	6	18	†	.....
Kansas City	Kaw Valley Ice & C. S. Co.	5	7	†	.....
Kingman	Kingman Ice & Creamery Co.	9	2	†	.....
Kinsley	Kinsley Artificial Ice Co.	11	10	†	.....
Kiowa	Kiowa Ice & C. S. Co.	6	12	†	.....
La Harpe	La Harpe Ice Co.	7	28	†	.....
Lake City	Medicine Valley Grain Co.	8	11	†	.....
Lamar, Colo.	Union Ice & Storage Co.			*	.....
Larned	C. W. Smith Elec. & Ice Co.	6	12	†	.....
Lawrence	Ice & Storage Co.	5	7	8	29
Leavenworth	Consumers Ice Co.	5	7	†	.....
Leavenworth	Crystal Ice Co.	9	2	†	.....
Leavenworth	D. S. Ryan	6	25	†	.....
Liberal	Liberal Light, Ice & Power Co.	9	2	†	.....
Lincoln	J. C. Cooper	7	14	†	.....
Lindsborg	Lindsborg Ice & Coal Co.	†	.....	†	.....
Luray	M. L. Bratton	7	14	†	.....
Lyons	Lyons Ice Co.	*	.....	*	.....
McPherson	McPherson Creamery & Ice Co.	4	8	*	.....
Mt. Hope	Berger & Son	4	8	5	6
McDonald	Victor Piedalue			*	.....
Macksville	Macksville Light & Ice Co.	†	.....	†	.....
Manhattan	Huse & Page	10	9	†	.....
Manhattan	Manhattan Gas & Elec. Co.	8	12	5	6
Marysville	Marysville Ice & C. S. Co.	6	18	†	.....
Meade	Artesian Ice & Light Co.	*	.....	*	.....
Medicine Lodge	Moxley & Dobson	5	15	5	6
Miltonvale	E. H. Krug	*	.....	†	.....
Minneapolis	Minneapolis Ice & Fuel Co.	*	.....	†	.....
Moline	Moline Creamery	8	11	5	27
Mound Ridge	Polar Ice Co.	5	15	†	.....
Mulvane	Mulvane Ice & C. S. Co.	9	10	†	.....
Neodesha	Neodesha Crystal Ice Co.	5	7	*	.....
Ness City	Ness City Ice Co.	*	.....	†	.....
Newton	Newton Ice & C. S. Co.	6	28	*	.....
Nickerson	Nickerson Meat & Ice Co.	*	.....	†	.....
Norton	Norton Ice Co.	8	12	8	8
Oakley	W. M. Prather	6	12	5	27
Oberlin	R. B. Vernon			*	.....
Olathe	City Ice & Storage Co.	7	31	5	17
Onaga	Onaga Light, Heat & Power Co.	5	7	*	.....
Osage	Farmers Coöp. Creamery Co.	4	8	4	22
Osawatomie	Osawatomie Ice Co.	6	18	†	.....
Oskaloosa	Moxley & Co.	7	31	8	18
Oswego	Citizens Ice Co.	9	10	†	.....
Ottawa	B. D. Bennett	7	31	*	.....
Overland Park	G. C. Conser			†	.....
Paola	Paola Crystal Ice Co.	9	10	†	.....
Parsons	Parsons Cold St. & Cry. Ice Co.	5	15	4	9
Parsons	Maser Bros.	†	.....	†	.....

		Licensed, 1919. Mo. Da.	Licensed, 1920. Mo. Da.
Peabody	Peabody Light, Power & Ice Co.....	2 18	2 17
Pittsburg	Hull & Dillon	7 31	*.....
Pittsburg	Standard Ice & Fuel Co.....	4 8	†.....
Plains	Plains Ice Co.....	*.....	†.....
Plainville	G. K. McClay	11 10	†.....
Pratt	Pratt Ice & Coal Co.....	7 1	†.....
Protection	Protection Ice Co	*.....	†.....
Russell	Anton Smetana	7 31	†.....
St. John	St. John Mills	7 28	*.....
Sabetha	T. J. Pace	4 8	*.....
Salina	Kansas Ice & Storage Co.....	2 3	*.....
Sedan	Sedan Crystal Ice Co.....	7 13	*.....
Seneca	Nemaha Butter & Ice Co.....	8 11	†.....
Sharon Springs	E. J. Erickson	*.....	*.....
Sterling	Sterling Ice & Produce Co.....	*.....	†.....
Stockton	Cooper Meat Market & Ice Co.....	*.....	*.....
Sylvan Grove	Skaggs & Krepps	8 21	5 27
Topeka	Beatrice Creamery Co.....	2 18	4 9
Topeka	Mutual Ice & C. S. Co.....	4 8	4 9
Topeka	Seymour Packing Co.	8 11	*.....
Topeka	Topeka C. S. Ice & Fuel Co.....	2 25	†.....
Topeka	Charles Wolff Packing Co.....	2 13	2 17
Troy	E. S. Leland	†.....	*.....
Vermillion	L. E. Barnes	5 7	5 29
Wamego	J. W. Machim .....	.....	4 29
Weir City	Union Ice & C. S. Co.....	6 12	*.....
Wellington	Wellington Ice & C. S. Co.....	*.....	†.....
Wellsville	Wellsville Elec. Lt. & Power Co.....	5 7	*.....
Wetmore	Ed Cawood	*.....	†.....
White Water	Jones & Gill	10 18	*.....
Wichita	Crystal Ice & Fuel Co.....	7 31	*.....
Wichita	Jacob Dold Packing Co.....	4 8	4 23
Wichita	Steffen-Bretch Ice & Ice Cr. Co.....	5 7	5 27
Wichita	Wichita Ice & C. S. Co.....	6 18	3 29
Willowdale	Farmers Un. Coöpn. Assn.....	*.....	†.....
Wilson	F. C. Klema	6 28	†.....
Winfield	Winfield Ice & C. S. Co.....	5 15	*.....
Yates Center	Yates Center Ice & C. S. Co.....	5 7	†.....

DEALERS IN NATURAL ICE.

Admire	Bennington & Co.....	\$.....	†.....
Admire	W. J. Groves .....	.....	*.....
Alton	H. B. Leach & Son.....	3 12	*.....
Barnes	Charles Burke .....	.....	5 27
Beloit	J. W. Duley	6 28	3 8
Beloit	Mulberry Ice Co.....	8 11	5 6
Bennington	John Lee	7 14	buys mfg.
Blue Rapids	Allerdice & Quinn	5 15	.....
Burdett	Frank Danford .....	.....	5 27
Cawker City	C. W. Holte	5 7	4 22
Cawker City	Lyss Smith & Co.....	6 12	.....
Cedar Point	H. O. Pinkston	4 8	.....
Clay Center	Starkweather & Wilson .....	.....	4 9
Clements	Hamilton & Zickefosse .....	.....	1 30
Clyde	J. D. & Geo. Danielson.....	.....	4 22
Delphos	S. J. Doyle	2 3	4 9
Delphos	G. D. Hockett .....	.....	4 29
Downs	T. P. Ray	\$.....	†.....

		Licensed, 1919. Mo. Da.	Licensed, 1920. Mo. Da.
Dunlap	Farmers' Union Store	_____	*.....
Ellis	C. M. Raynesford	_____	8 18
Emmett	Frank Ditch	_____	4 22
Eskridge	Parmiter Bros.	_____	1 30
Eudora	J. M. Tarleton	5 7	5 6
Everest	R. H. Rosenhoover	_____	4 29
Falun	A. R. Anderson	_____	4 29
Fostoria	Geo. McCargar	\$.....	8 29
Gaylord	Hays & Hagadorn	\$.....	8 18
Glasco	J. G. Debolt	\$.....	†.....
Glen Elder	Perkins & Co.	_____	8 18
Green	O. A. Smith	_____	1 30
Gypsum	T. P. Wheatley	4 8	8 18
Haddam	E. W. McKenney	_____	*.....
Hanover	Charles Schropp	_____	5 6
Havensville	E. W. Mesmer	_____	*.....
Hays	R. B. Thomas	\$.....	_____
Herndon	Andrew Unger	_____	*.....
Hill City	J. N. Welty	\$.....	buys mfg.
Horton	W. H. Kelley	5 7	4 29
Huron	John L. Snavely	_____	5 27
Industry	Jacob Gibbs	5 7	*.....
Industry	Kenlock F. Jones	9, 10	buys mfg.
Irving	A. J. Carlson	_____	4 22
Kanona	J. P. Garrison	_____	5 6
Kirwin	Herbert Hickman	\$.....	_____
Kirwin	Clarence Mason	_____	3 29
La Cygne	W. A. Twogood	\$.....	_____
La Cygne	Cullison & Miller	7 23	4 9
Lenora	W. L. Turner	6 23	_____
Lenora	Floyd Bull	_____	4 22
Logan	G. E. Pearson	*.....	_____
Logan	L. L. Search	_____	*.....
Longford	Farmers Merc. Coöp. Assn.	_____	8 29
Long Island	Skelton & Hammond	\$.....	8 29
Louisville	H. M. Harrison	_____	4 22
Lucas	Wm. Craycraft	_____	3 29
Lyndon	Mutual Ice Co.	4 8	4 29
McFarland	Ringle & Mueller	_____	1 30
Marion	Winchester & Son	\$.....	*.....
Melvorn	Melvorn Ice Co.	\$.....	8 29
Melvorn	I. W. Irey	\$.....	_____
Morganville	J. W. King	\$.....	3 8
Mound City	Underhill & Co.	8 11	4 9
Muscotah	E. W. Allen	\$.....	5 6
Muscotah	Chas. Ellson	\$.....	4 29
Norcatour	Fred L. Auker	4 8	*.....
Nortonville	John A. Didde	_____	4 22
Oakhill	L. M. Cooney	_____	5 6
Osage	E. L. Lloyd	5 15	8 18
Osawkie	Louis Puderbaugh	_____	1 30
Otego	Farmers Merc. Co.	6 12	_____
Paradise	Paradise Meat Market	_____	5 28
Paxico	J. C. Werner	_____	4 22
Paxico	Wilt Bros.	_____	4 22
Randolph	City Meat Market	7 1	5 27
Ransom	C. J. DeWitt	2 13	8 29
Reading	T. V. Bailey	\$.....	_____

		Licensed, 1919. Mo. Da.	Licensed, 1920. Mo. Da.
Reading	Henry E. Rains	_____	4 22
Robinson	F. A. Bombeck	_____	8 8
Scandia	V. E. Anderson	_____	4 29
Seneca	Otto A. Kelm	_____	1 30
Severance	W. W. Ward	_____	5 6
Simpson	T. F. Wanzer	\$.....	8 29
Smith Center	Rogers Ice Co.	\$.....	4 29
Strong City	W. W. Harvey	_____	4 22
Tescott	W. W. Watkins	_____	5 6
Troy	Ralph VanBebber	9 2	2 17
Valley Falls	Moxley Clark & Co.	5 7	†.....
Vermillion	L. E. Barnes	_____	5 29
Washington	C. H. Philbrook	5 15	4 29
Waterville	W. R. Summers	_____	1 30
Westmoreland	W. W. Plummer & Co.	_____	4 9
Westmoreland	H. M. Pomeroy	_____	4 29
Williamsburg	D. Fogle Merc. Co.	\$.....	8 8
Woodston	B. S. Williams	_____	*.....

Suits were requested against the following, without result: Baxter Springs, Willard Coal & Ice Co.; Pawnee Rock, Pawnee Rock Elec. & Power Co.; Spearville, Polar Ice Co.; Wa Keeney, Guy DeBoer.

BOTTLED WATERS LICENSED, 1919-1920.

STATE COMPANIES.

Nov. 22, 1919...	Argentine	Tucker Mineral Springs.
Sept. 8, 1919...	Coffeyville	Crystal Springs Bottling Works.
Aug. 16, 1919...	El Dorado	Dew Drop Water Company.
Aug. 16, 1919...	El Dorado	Polar Water Company.
July 18, 1919...	Fort Scott	H. T. Jensen.
April 22, 1920...	Hutchinson	Bennett & Co.
Aug. 5, 1919...	Hutchinson	T. J. Bixler.
Aug. 19, 1919...	Independence	Aganippe Spring Water Co.
Mar. 29, 1920...	Lawrence	McNish Bottling Company.
April 22, 1920...	Ottawa	California Springs Water Co.
Aug. 25, 1919...	Parsons	Rock Heart Mineral Water Co.
Sept. 3, 1919...	Sabetha	Sycamore Mineral Springs.
Nov. 6, 1919...	Salina	Salina Bottling Works.
Aug. 5, 1919...	Topeka	Topeka Pure Water Company.
Aug. 13, 1919...	Turner	J. Law More.
Aug. 13, 1919...	Waconda Springs	Waconda Sanitarium.
July 31, 1919...	Wichita	Distilled & Aerated Water Co.
Feb. 20, 1920...	Wichita	Viola Springs Water Co.
April 22, 1920...	Wichita	Wichita Vinegar & Bottling Works.

OUT-OF-STATE COMPANIES.

Sept. 8, 1919...	French Lick, Ind.	French Lick Hotel Co.
July 31, 1919...	Manitou, Colo.	Manitou Mineral Water Co.
Aug. 28, 1919...	Mineral Wells, Texas...	Crazy Well Water Co.
April 22, 1920...	Portland, Maine	Hiram Ricker & Sons.
Sept. 10, 1919...	Santa Barbara, Cal. ...	Veronica Medicinal Spring Water Co.
Aug. 19, 1919...	Waukesha, Wis.	White Rock Mineral Water Co.

CERTIFICATES ISSUED TO RAILROADS.

FIRST HALF OF 1919-1920.

<i>Railroad, date and town.</i>	<i>Source.</i>
Arkansas Valley Interurban:	
Aug. 11, 1919..... Hutchinson	City supply.
Aug. 28, 1919..... Newton	City supply.
Feb. 16, 1920..... Wichita	City supply.
Anthony & Northern:	
Aug. 19, 1919..... Pratt	City supply.
Atchison, Topeka & Santa Fe:	
Aug. 27, 1920..... Abilene	City supply.
Feb. 18, 1920..... Anthony	City supply.
Jan. 28, 1920..... Arkansas City	City supply.
Oct. 18, 1919..... Atchison	City supply.
Feb. 18, 1920..... Burlington	City supply.
Feb. 16, 1920..... Canton	Private well.
Jan. 29, 1920..... Cedarvale	Hauled.
Jan. 29, 1920..... Chanute	City supply.
Jan. 29, 1920..... Cherryvale	City supply.
Jan. 29, 1920..... Coffeyville	City supply.
Aug. 11, 1919..... Colony	Cistern. (Refused.)
Oct. 2, 1920..... Colony	Well. (Refused.)
Jan. 20, 1920..... Colony	Hauled.
Oct. 28, 1919..... Concordia	City supply.
Feb. 16, 1920..... Dodge City	Private supply.
Feb. 10, 1920..... Elkhart	Private supply.
Nov. 6, 1919..... Ellinwood	City supply.
Jan. 28, 1920..... Emporia	City supply.
Sept. 19, 1919..... Englewood	Private supply.
Jan. 27, 1920..... Florence	Hauled.
Feb. 8, 1920..... Garden City	Private supply.
Nov. 6, 1919..... Great Bend	City supply.
Sept. 9, 1919..... Gridley	Private. (Refused.)
Feb. 18, 1920..... Holyrood	City supply.
Aug. 11, 1919..... Hutchinson	City supply.
Aug. 11, 1919..... Independence	City supply.
Feb. 14, 1920..... Jetmore	Private supply.
Aug. 19, 1919..... Kansas City	City supply.
Mar. 1, 1920..... Kinsley	City supply.
Dec. 10, 1919..... Kiowa	City supply.
Jan. 28, 1920..... Leavenworth	City supply.
Aug. 11, 1919..... McPherson	City supply.
Aug. 11, 1919..... Minneapolis	City supply.
Jan. 28, 1920..... Moline	Hauled.
Aug. 23, 1919..... Newton	City supply.
Jan. 28, 1920..... Osage City	City supply.
Jan. 28, 1920..... Ottawa	City supply.
Aug. 19, 1919..... Pratt	City supply.
Nov. 4, 1919..... Salina	City supply.
Sept. 9, 1919..... Sand Creek	Hauled.
Jan. 28, 1920..... Scott City	City supply. (Refused.)
Feb. 28, 1920..... Strong City	City supply.
Aug. 11, 1919..... Topeka	City supply.
Aug. 11, 1919..... Winfield	City supply.
Chicago, Burlington & Quincy:	
Oct. 18, 1919..... Atchison	City supply.
Oct. 23, 1919..... Concordia	City supply.
Chicago, Rock Island & Pacific:	
Sept. 24, 1919..... Bucklin	City supply.
Jan. 28, 1920..... Herington	City supply.

<i>Railroad, date and town.</i>		<i>Source.</i>
Sept. 24, 1919.....	Horton	Private supply.
Aug. 11, 1919.....	Liberal	Private supply.
Aug. 19, 1919.....	Pratt	City supply.
Nov. 4, 1919.....	Salina	City supply.
Aug. 11, 1919.....	Topeka	City supply.
Feb. 16, 1920.....	Wichita	City supply.
Kansas City, Kaw Valley & Western:		
Oct. 16, 1919.....	Bonner Springs	City supply.
Kansas City, Mexico & Orient:		
Feb. 10, 1920.....	Wichita	Private supply.
Kansas City Northwestern:		
Aug. 19, 1919.....	Kansas City	City supply.
Kansas City Southern:		
Aug. 19, 1919.....	Pittsburg	City supply.
Kansas Southwestern:		
Jan. 28, 1920.....	Arkansas City	City supply.
Jan. 28, 1920.....	Anthony	City supply.
Midland Valley:		
Feb. 10, 1920.....	Wichita	Private supply.
Missouri, Kansas & Texas:		
Oct. 9, 1919.....	Burlington	City supply.
Jan. 29, 1920.....	Iola	City supply.
Aug. 19, 1919.....	Junction City	City supply.
Jan. 29, 1920.....	Parsons	City supply.
Missouri Pacific:		
Jan. 28, 1920.....	Arkansas City	City supply.
Oct. 18, 1919.....	Atchison	City supply.
Jan. 29, 1920.....	Coffeyville	City supply.
Oct. 28, 1919.....	Concordia	City supply.
Jan. 28, 1920.....	Conway Springs	City supply.
Sept. 5, 1919.....	Council Grove	City supply.
Feb. 10, 1920.....	Fort Scott	City supply.
Jan. 6, 1920.....	Greenleaf	Private supply.
Jan. 28, 1920.....	Hoisington	Private supply.
Sept. 24, 1920.....	Horace	Hauled.
Aug. 11, 1919.....	McPherson	City supply.
Aug. 13, 1919.....	Madison	City supply.
Aug. 28, 1919.....	Marquette	Private supply.
Oct. 8, 1919.....	Osawatomie	City supply.
Nov. 4, 1919.....	Salina	City supply.
Aug. 19, 1919.....	Sedan	City supply.
Jan. 28, 1920.....	Stafford	City supply.
Aug. 11, 1919.....	Topeka	City supply.
St. Joseph & Grand Island:		
Oct. 18, 1919.....	Hiawatha	City supply.
Dec. 1, 1919.....	Highland	City supply.
Jan. 29, 1920.....	Marysville	City supply.
St. Louis & San Francisco:		
Jan. 29, 1920.....	Cherryvale	City supply.
Oct. 26, 1919.....	Ellsworth	Private. (Refused.)
Nov. 18, 1919.....	Ellsworth	Private. (Passed.)
Feb. 10, 1920.....	Fort Scott	City supply.
Jan. 29, 1920.....	Neodesha	City supply.
Aug. 19, 1919.....	Pittsburg	City supply.
Feb. 16, 1920.....	Wichita	City supply.
Union Pacific:		
Aug. 19, 1919.....	Beloit	Private supply.
Aug. 8, 1919.....	Ellis	Private supply.

<i>Railroad, date and town.</i>		<i>Source.</i>
Jan. 28, 1920.....	Highland	City supply.
Aug. 19, 1919.....	Junction City	City supply.
Aug. 19, 1919.....	Kansas City	City supply.
Jan. 28, 1920.....	Leavenworth	City supply.
Aug. 11, 1919.....	McPherson	Private. (Refused.)
Oct. 8, 1919.....	McPherson	City supply.
Aug. 27, 1919.....	Manhattan	Private supply.
Jan. 29, 1920.....	Marysville	City supply.
Nov. 7, 1919.....	Plainville	Private supply. (Refused.)
Nov. 4, 1919.....	Salina	City supply.
Aug. 11, 1919.....	Topeka	City supply.

SECOND HALF OF 1919-1920.

Arkansas Valley Interurban:

Mar. 12, 1920..... Newton City supply.

Atchison, Topeka & Santa Fe:

May 17, 1920..... Dighton Private supply.

Mar. 12, 1920..... Arkansas City City supply.

Mar. 12, 1920..... Burlington City supply.

April 5, 1920..... Ellinwood City supply.

April 24, 1920..... Minneapolis City supply.

April 12, 1920..... Newton City supply.

Mar. 12, 1920..... Salina City supply.

Kansas City, Kaw Valley & Western:

April 5, 1920..... Lawrence City supply and private well.

Kansas Southwestern:

Mar. 12, 1920..... Arkansas City City supply.

Missouri, Kansas & Texas:

Mar. 12, 1920..... Burlington City supply.

Missouri Pacific:

Mar. 15, 1920..... Arkansas City City supply.

Mar. 12, 1920..... Greenleaf City supply.

Mar. 15, 1920..... Salina City supply.

Chicago, Rock Island & Pacific:

Dec. 12, 1920..... Horton Private supply.

Union Pacific:

April 24, 1920..... Miltonvale Private supply.

April 27, 1920..... Oakley City supply.

May 17, 1920..... Plainville Private supply.

Mar. 12, 1920..... Salina City supply.

Practically all dealers in these commodities are familiar now with the provisions of the law and the regulations of the Board, but we have found it necessary in a number of instances to request disciplinary action either by the attorney of the county in which the dealer may be located, or by the attorney-general, in order to secure compliance with the regulations. Usually a letter from the county attorney to the offender resulted in his taking steps immediately to secure a license, but in a few instances it was necessary for a complaint to be made in the justice court, and in all these cases conviction and payment of the fine resulted.

This laboratory is supported by fees collected for its work.

FINANCIAL.

The entire income for the Division of Water and Sewage is divided into three parts:

(1) Salary fund for the Engineering Division, provided by the University:

- (a) Engineering school.
- (b) State work fund.
- (c) Laboratory fund.

(2) Sanitary fund No. 9, appropriated to the State Board of Health for the expense incurred in investigations under the water and sewage law.

(3) Moneys received from fees established by the State Board of Administration, approved by the State Board of Health, adopted under chapter 327, Laws of 1915.

The total of each for the past year is shown as follows:

Salary fund	\$5,250.00
Fund No. 9	5,000.00
Fees	14,042.78

This includes a balance on hand July 1, 1919, of \$2,085.49.

Expenditures to June 1, 1920, have been as follows:

Salary fund	\$4,200.00
Fund No. 9	3,549.45
Fees	11,955.14

Fee fund divided as follows:

Equipment and expense	\$2,042.57
Express	1,290.73
Salaries	8,621.84

The balance remaining in the salary fund is due to the fact that there was not a sufficient amount to provide the necessary assistants and to the difficulty in securing adequate help during the latter part of the year.

The balance in the laboratory fee fund is due to the fact that during the past year very little equipment has been purchased. A fair supply was on hand and it was deemed advisable to wait for lower prices, at least as long as possible, before making any considerable expenditures.

A slight saving was made by combining some of the positions in the laboratory on August 1, which was immediately expended in the raising of salaries of some of the remaining positions.

SPECIAL WORK.

It was reported to you last year that no adequate legislation had as yet been passed for the controlling of the discharge of salt water and waste from oil development into the waters of the state and no particular change has taken place during the past year, but this department has established a number of sampling stations on the important rivers of the state and receives samples each week from them. These are analyzed for chlorides, and it is hoped that we will be able to determine quickly any effect upon the streams of the introduction of salt water. We are

glad to report that as yet no bad effects from the oil developments in the new Marion county field and other places on the headwaters of the Cottonwood and Neosho rivers have been felt on this, the most important stream in Kansas, from a water-supply standpoint.

It has not been possible to attempt any survey of the oil wells themselves in addition to that done last year, but such is believed to be vitally necessary. It is hoped that the next Legislature will make provision for this work and that it will also take some steps to prevent the future ruination of streams for this purpose.

The discharge of refinery wastes, more particularly the waste water from the agitators in which the kerosenes and gasolines are washed, has again caused serious trouble in the Verdigris river below Neodesha, affecting the water supplies at Cherryvale, Independence and Coffeyville. No action has been taken against the Standard Oil Company by these cities nor by the attorney-general, although it was attempted to secure action from both sources. The cities seem to feel that the state should protect them in the matter, but the attorney-general's office has been slow to assist us.

The same trouble has cropped out at El Dorado and action at that place is under consideration at the present time. The extreme difficulty met with in attempting to treat wastes of this character has resulted in a plan of storing the liquids in earthen reservoirs and subsequently discharging them into the streams during high-water periods. This method has not been successful at Neodesha on account of the leakage from the reservoirs contaminating the stream almost as badly as the waste discharged into it directly.

INADEQUATE SEWERAGE LAWS.

The present laws of this state in regard to the construction of sewer systems and sewage-treatment plants are contradictory in some instances and very inadequate. One of the principal features with which we are concerned is the limitation of \$30,000 placed on the cost of sewage-treatment plants. In many instances more than one sewage-treatment plant is necessary in cities, on account of the topography, and it is very seldom that the cost of even one plant may be kept within this sum.

The Verdigris river, including its tributaries, is used as a source of water supply at Fredonia, Eureka, Neodesha, Cherryvale, Independence and Coffeyville. Each of the cities mentioned discharges sewage into the stream. As reported to you last year, during one season the total flow of this stream is used for domestic water supply at least three times before it reaches the southern boundary of the state. At Independence, only a few miles above Coffeyville, there are four separate sewer outlets, but the effluent from only one of them is treated. In 1909, when that sewage-treatment plant was constructed, the total cost practically reached the amount allowed by law, and since then it has not been possible for the city legally to construct the additional plants which are deemed necessary in order to protect the citizens of Coffeyville through their water supply. The State Board of Health ordered the construction of additional plants. Since that time many extensions have been

made, until practically the entire city of Independence is accessible to sewers. In order to be consistent, this department has refused to grant permits in answer to the applications made for the various extensions, although obviously the extensions are necessary for the protection of the citizens of Independence. It is hoped that action on this matter may also be taken by the next Legislature, so that, regardless of the cost, if it is within reason, the needed facilities may be provided.

A serious water shortage occurred during the past summer and fall in a large number of cities in the state, due to the unusually dry weather which prevailed. An attempt has been made during this year to bring before the cities the necessity for taking such steps as will prevent the recurrence of this shortage. In some instances considerable opposition to our efforts has been met, although in many of them the work is under way at the present time.

The following is a partial list of cities which were practically entirely out of water over a considerable period of time and found it necessary to resort to extreme measures in order to conserve a small quantity of water for fire protection: Council Grove, Emporia, Erie, Garnett, Jewell, La Cygne, Lyndon, Olathe, Ottawa, Paola.

The situation at El Dorado, Augusta and Douglass in the matter of public water supply continues to be extremely unsatisfactory. The salt in the Walnut river for practically the entire year has been in such quantities that the water is unfit for drinking and domestic purposes. The piping in the distribution system, the pumps and the plumbing in the houses is rapidly deteriorating on account of the corrosive action of the water, but the development of a satisfactory supply in any of these communities is very difficult. At the present time a small supply of approximately one-third the required quantity is believed to have been found near Augusta. Douglass has no relief in sight. El Dorado voted down bonds approximately two to one which were preposed for the development of an impounding reservoir several miles from town, for the reason, it is stated, that people believed that oil finally would be found on the watershed of the reservoir and it would go the way of the Walnut river.

In coöperation with the county health department, we have loaned a bacteriologist from this division and our field kit for making bacteriological analyses of water for the purpose of examining all wells and cisterns in Augusta, Douglass, El Dorado and other cities in the oil fields. This work was started June 1, and it is expected it will continue at least until September 1, in an effort to protect the citizens of these places, which are practically without any public drinking-water supply.

The extension of the Butler county oil field to the north has brought about considerable activity in the vicinity of Peabody, Florence and Marion. Peabody and Florence have concerned themselves actively during the past year in the obtaining of new and adequate water supplies and the extension of their sewer systems, in order to take care of the expected great increase in population.

Florence has secured a large spring on the outskirts of the city and is prepared to pipe this into the town and substitute it for their wholly

inadequate present water supply taken from a well on the bank of the Cottonwood river.

Peabody has thoroughly investigated the water resources for miles around, and at the present writing has practically decided upon a spring nine miles northeast of the city, within two miles of the city of Florence. The development of this spring and the carrying of the water into town will cost an enormous amount, but these two cities are alive to their problems.

The city of Marion, which for many years has refused to comply with an order from the State Board of Health to secure a new and satisfactory water supply, so far as is known by this department has as yet taken no steps in this direction. This city, it will be recalled, maintains that it does not furnish water for drinking or domestic purposes, consequently it does not come within the jurisdiction of this law. Before any oil activities were apparent in the vicinity of Marion it was the largest city in the state without a municipal water supply, and consequently the most backward city of its size. With the constantly increasing prospects of the extension of the oil field to its vicinity, this city should be urged immediately to undertake such steps as will provide for a satisfactory supply and for the abandonment of its present supply, taken from Mud creek within the city limits, and provided with no provision for treatment.

ORDERS.

During the past year an application was received from the city of Emporia for a permit to make extensive additions to its sewer system. On account of the fact that this is practically the only city at the present time discharging untreated sewage into the Neosho river, which is used as a source of public water supply by the cities of Burlington, Iola, Gas, Humboldt, Chanute, Erie, Parsons and Oswego below, it was recommended that the application be denied until such time as provision was made for treating the sewage from the city. Steps are under way at the present time for carrying out this improvement.

An investigation of the water supply of Scott City, which has extended over a period of several years, has shown that the wells installed in 1913 have become contaminated. This is believed to be due to the extensive use of cesspools within a district prohibited by a city ordinance, which was adopted at the request of this department when the permit for the construction of the water supply in 1913 was granted. Consequently this city was ordered to discontinue the use of the present wells or make provisions for the construction of a sewer system and the abandonment of the existing cesspools. The latter course was adopted, and plans and specifications have been approved for the construction of the sewer system and sewage-treatment plant.

No action has been taken by the state attorney-general's department against those cities which have failed, neglected or refused to comply with the provisions of the orders issued by the Board during the past years. In fact, it has been impossible to secure but the slightest degree of coöperation from that office during the past year. A great many re-

quests have been made for assistance in the matter of compelling cities with surface water supplies to send in samples regularly each week, as provided for under the regulations, and no answer has ever been received.

A meeting was held with representatives of the three cities of Cherryvale, Independence and Coffeyville for the purpose of determining upon some course of action against the Standard Oil Refinery at Neodesha on account of its contamination of the Verdigris river with its wastes. It was promised that a representative of the attorney-general's office would be present at that meeting, but none appeared, and although promises have been secured from the attorney-general at various times since that an investigation of the matter would be immediately made, as far as we or the cities concerned are able to learn, no action whatever has been taken.

A considerable number of requests have been made for action against ice companies which have failed to comply with the regulations of the Board, and in one or two instances letters written by the attorney-general brought response, but in many other instances no action whatever has been taken.

The fact that no legal action is taken against persons, companies or municipalities who violate at will regulations of the State Board of Health and the laws of the state has resulted in a considerable amount of defiance to the work of this division, and it is believed that if this department is to receive no coöperation from the legal authorities of the state it should be permitted to employ its own attorney in order to prosecute the violators of these regulations.

C. A. HASKINS, *Engineer.*

REPORT OF DIVISION OF VITAL STATISTICS.

In presenting its contribution to the tenth biennial report of the State Board of Health, this division calls attention to the facts that the vital-statistics Law of Kansas became operative in the year 1911; that Kansas death reports were accepted for registration by the United States Census Bureau in 1914, and its birth reports in 1917, and that the high standard of accuracy has been consistently maintained. While we are conscious of the possibility that slight errors and inconsistencies may have crept in, we feel that the report which we present is as reliable as any that can be offered.

In preparing our rates we have continued to use the population basis prepared annually by the State Department of Agriculture. We feel that this method gives us rates that are more consistently accurate, since the yearly compilation of returns affords much better opportunity to follow accurately the variations of population than could be obtained by arbitrary percentage change in the decennial returns of the United States Census Bureau.

The state death rate for 1918 is the highest on record, being 15.2 deaths per 1,000 of population. It is readily accounted for by the unparalleled pandemic of influenza. Large as the increase is over the preceding year, it is not quite so great as that shown by the total registration area of the United States. The death rate of Kansas for 1917 is 12 and for 1918 is 15.2—an increase of 26½ per cent. The death rate of the total registration area for 1917 is 14.2 and for 1918 is 18.2—an increase of 28 per cent. It may, therefore, be considered that the Kansas losses were not above the average.

Passing on to our 1919 record, we find that the state death rate has dropped to 10.9 deaths per 1,000 of population, a rate remarkably low. It is explained in some measure by the theory that the influenza attack of 1918 precipitated the death of many of the physically unfit.

It is only logical to expect higher death rates in Kansas as the years go by. We have been favored with the demography of a young state—a state populated largely by young people, immigrants coming in the full bloom of youthful vigor to settle a new country. Such settlers bring more than youth; they bring eugenic qualities that make for a long-lived race. The ambition to go to a new state, brave hardships and carve out a career means virile blood and high spirit, and the descendants of such people may be expected to contribute low rates for death and disease.

But we are now a settled country. We have many attractions. We offer great business opportunities. The lure of easy fortunes in oil and other discoveries goes out from us. Our bracing climate draws health seekers. People now come here, already worn in body, to find a place where living is easy. Some of our cities are becoming large. We are increasing the size of our factories and industrial plants. Inevitably will our death rate mount higher as the years go by, for the fact is indisputable

that from being a young state we are entering upon middle age, and middle age is the period in which the American death rate rises.

We present with this report a chart of comparative rates for five years, which presents many features of especial interest. It must be borne in mind in using these figures that the death rates for the cities are increased by reason of the presence of local hospitals. It is very general for doctors to send serious cases from their country practice to the city hospitals, thus markedly increasing the death rate of the cities. The rates of Shawnee, Labette and Miami counties are materially increased by reason of the presence of the State Hospitals, and the National Military Home increases the rate for Leavenworth county.

The many deaths from influenza in the army camps inject an element of uncertainty into the matter of preparing death rates for the counties of Geary and Leavenworth for the year 1918. The changing population of the camp makes it so impossible to present an accurate basis that it seems best to show only the total number of deaths and omit 1918 rates for these counties. The deaths in the camps are included in the state total, and the state death rate is figured without any change for army population.

In the interest of economy of space, the tables included in this report are limited to those that will serve to give the information most useful in showing the progress in public health of the respective counties of the state. They include births and deaths by counties, and the causes of death are classified to the extent of showing specific rates by counties for the most common causes.

The tables do not by any means represent the whole mass of data prepared and on file in the Division of Vital Statistics. Health officers, statisticians and others desirous of information as to matters not elaborated therein are invited to write for more minute information as to special points of interest.

Below is a summary of the printed tables. It should be carefully noted that the rates shown are figured on a basis of 1,000 population, except in tables of deaths from specific diseases, which are based on 100,000 population. There are ten tables, all classified by counties and larger cities, excepting table No. 10, which shows counties only.

1. Showing the number of deaths and the rate per 1,000 population, also giving population upon which rates are based. Ready comparison may be made of the record of mortality of any county in the state as compared with its neighbors by the use of this table.
2. Showing comparative death rates for the last five years. This table shows how a county has maintained its standing as to mortality.
- 3A and 3B. Showing total deaths by months for the years 1918 and 1919. Health officers may see at a glance the months of greatest mortality.
4. Illustrating incidence of certain important diseases for 1918 and 1919. Showing number of cases and rate per 100,000 of population. Ready information as to the degree in which any county has protected itself from communicable diseases.
5. Special influenza and pneumonia table for 1918 and 1919. Of particular interest as showing the degree in which various localities suffered from the ravages of the 1918 epidemic.

6. Showing births and birth rate per 1,000 population for 1918 and 1919. Health officers, physicians and local registrars are requested to bear in mind that a low birth rate usually means that the doctors of that district are not reporting births.
- 7A and 7B. Showing births by sex, color and parent nativity. Of especial value to social workers.
8. Showing comparison of birth rates per 1,000 population for the last five years. An important index to the virility of a community.
9. Infant mortality rates and total deaths of children under one year of age for 1918 and 1919. Any community having a high rate in this table must spare no expense in improving its health measures.
10. Table of marriages and marriage rates per 1,000 population, by counties only.

A study of the principal causes of death as included in this report, and shown in table No. 4, brings out certain facts worthy of special comment.

TYPHOID FEVER. The state rate for 1919 is reduced to the gratifying showing of 7.6 per 100,000 population. The energies of the State Board of Health as a whole, and the state epidemiologist in particular, have been directed to the control of this disease unceasingly. The 1919 rate is a well-earned result.

MEASLES. It is doubtful if any state in the United States registration area ever before produced reliable statistics showing so low a death rate for measles as our 1919 rate. The deaths for the entire state total only 12, and the rate is 0.68 per 100,000 of population. We attempt no explanation, but pray only to be continued in favor, to which end may Kansas health officers also work.

TUBERCULOSIS. The death rate from the disease did not reach a high rate in 1918 in spite of the influenza epidemic, going only to 59.9. For 1919 we have a gratifying drop to 50.8, the lowest rate in the recorded history of the state.

DIARRHOEA AND ENTERITIS (UNDER TWO YEARS). Whatever effect the great influenza pandemic of 1918 may have had upon other diseases, it is not credible that it could have been an agent in the gratifying reduction in these diseases. The drop in rates to 30.6 for 1918, and still further to 25 for 1919, may well be claimed as the outcome of the constant drive for the education of the public in the care and feeding of their babies. There has been a steady decline in rate, as follows: 1916, 46.8; 1917, 45.3; 1918, 30.6; 1919, 25. The Division of Child Hygiene is paying excellent returns on the money invested.

INFLUENZA. The greatest interest in this report centers in the figures for influenza. A special table is therefore presented, showing the total deaths and rates for influenza and pneumonia for the years 1918 and 1919. Examination of this table shows that the 1918 epidemic was universal throughout the state, only a single county escaping. The deaths from the combined diseases for 1918 give the great total of 8,688 for the state, and serve to explain the increase in the 1918 death rate.

IMPORTANT RATES.

The most important rates shown in these tables are:

	1918.	1919.
State death rate per 1,000 population	15.2	10.9
State birth rate per 1,000 population	22.9	21.1
State infant mortality rate (ratio of deaths per 1,000 living births)....	78.5	68.5
State marriage rate per 1,000 population	9.6	11.6

As compared with the rates for the whole registration area of the United States, the death rates are very favorable, the birth rates are 10 per cent low, which is about the same ratio as in preceding years; the infant mortality rates are very good indeed, being one-fourth lower than the area at large.

TABLE No. 1 Showing population, deaths and death rates per 1,000 population, by counties, 1918 and 1919 (still births not included).

COUNTIES AND CITIES.	1918.			1919.		
	Population.	Deaths.	Death rate per 1,000.	Population.	Deaths.	Death rate per 1,000.
STATE TOTALS.....	1,784,341	26,508	15.2	1,759,793	19,247	10.9
Allen, <i>except</i>	16,957	195	11.5	16,193	145	9.0
Iola.....	9,291	153	16.5	9,479	106	11.2
Anderson.....	12,230	144	11.8	12,456	123	9.9
Atchison, <i>except</i>	11,720	118	10.1	12,432	88	7.1
Atchison city.....	15,240	219	14.4	15,840	194	12.6
Barber.....	9,581	114	11.9	10,272	90	8.7
Barton, <i>except</i>	12,849	176	13.7	13,849	121	9.1
Great Bend.....	5,023	74	14.8	4,613	81	17.5
Bourbon, <i>except</i>	12,895	153	11.8	12,691	113	8.9
Fort Scott.....	12,325	228	18.5	12,839	162	12.6
Brown.....	20,933	238	11.4	21,317	172	8.1
Butler, <i>except</i>	24,863	202	8.1	25,819	140	5.4
Augusta.....	5,550	103	18.6	4,834	77	17.8
El Dorado.....	16,246	224	13.8	15,327	134	8.7
Chase.....	6,641	84	12.6	6,921	62	9.0
Chautauqua.....	10,798	114	10.6	10,894	102	9.4
Cherokee, <i>except</i>	29,108	485	16.7	30,180	371	12.3
Galena.....	5,120	109	21.3	4,925	89	18.1
Cheyenne.....	4,939	49	9.9	5,418	44	8.1
Clark.....	5,048	33	6.5	5,174	51	9.9
Clay.....	15,196	182	12.0	15,239	152	10.0
Cloud, <i>except</i>	13,498	163	12.1	13,492	111	8.2
Concordia.....	4,321	136	31.4	4,500	99	22.0
Coffey.....	15,330	159	10.4	15,031	146	9.7
Comanche.....	5,353	47	8.8	5,055	50	9.9
Cowley, <i>except</i>	13,953	223	16.0	16,343	141	8.6
Arkansas City.....	9,811	178	18.2	10,703	152	14.2
Winfield.....	7,237	177	24.3	8,323	132	15.9
Crawford, <i>except</i>	42,818	737	17.2	42,327	483	11.4
Pittsburg.....	18,048	272	15.1	17,922	184	10.3
Decatur.....	8,023	62	7.7	8,005	64	8.0
Dickinson.....	26,112	334	12.8	25,874	286	15.1
Doniphan.....	16,616	162	9.8	15,576	130	8.3
Douglas, <i>except</i>	11,631	142	13.4	11,670	83	7.1
Lawrence.....	13,456	203	15.1	13,394	155	11.6
Edwards.....	6,865	57	8.3	6,594	44	6.7
Elk.....	10,202	104	10.2	10,343	91	8.8
Ellis.....	13,843	198	14.3	14,180	162	11.4
Ellsworth.....	10,138	137	13.5	10,085	96	9.5
Finney.....	7,434	140	18.8	8,197	88	10.7
Ford, <i>except</i>	9,511	115	12.1	9,138	116	12.7
Dodge City.....	4,800	108	22.5	4,648	67	14.4
Franklin, <i>except</i>	13,811	164	11.9	13,819	88	6.4
Ottawa.....	9,489	147	15.5	9,532	138	14.5
Geary, <i>except</i>	4,237	1,367	.....	6,234	116	18.6
Junction City.....	8,507	181	22.4	7,119	75	10.5
Gove.....	4,645	37	8.0	4,973	31	6.2
Graham.....	7,203	65	9.0	7,153	64	8.9
Grant.....	1,094	6	5.9	1,095	4	3.6
Gray.....	4,592	51	11.1	4,213	28	6.6
Greeley.....	1,143	4	3.9	1,196	4	3.3
Greenwood.....	15,041	172	11.5	15,011	141	9.4
Hamilton.....	2,540	30	11.9	2,430	39	15.7
Harper.....	12,698	128	10.1	13,603	123	9.0
Harvey, <i>except</i>	10,586	112	10.6	10,817	127	11.7
Newton.....	8,133	207	25.2	8,254	160	19.4
Haskell.....	1,720	11	6.4	1,524	11	7.2
Hodgeman.....	3,739	21	5.6	3,578	37	10.3
Jackson.....	14,668	191	13.0	15,017	156	10.4
Jefferson.....	15,063	192	12.7	15,047	132	8.8
Jewell.....	15,963	172	10.8	16,011	139	8.7
Johnson.....	17,129	257	15.0	17,303	191	11.0
Kearny.....	2,593	29	11.2	2,595	20	7.7
Kingman.....	11,300	124	11.0	11,633	121	10.4
Kiowa.....	6,233	50	8.0	6,176	40	6.5
Labette, <i>except</i>	17,945	341	18.9	17,617	274	15.6
Parsons.....	17,236	230	16.2	16,445	210	12.8
Lane.....	2,438	16	6.4	2,443	17	7.0
Leavenworth, <i>except</i>	19,231	639	35.3	19,625	445	22.7
Leavenworth city.....	21,849	382	17.5	22,000	274	12.5

TABLE No. 1—CONCLUDED. Population, deaths and death rates, 1918 and 1919.

COUNTIES AND CITIES.	1918.			1919.		
	Population.	Deaths.	Death rate per 1,000.	Population.	Deaths.	Death rate per 1,000.
Lincoln.....	10,080	79	7.9	10,027	83	8.3
Linn.....	15,088	157	10.4	15,408	157	10.2
Logan.....	3,521	22	6.3	3,272	17	5.2
Lyon, <i>except</i>	15,108	148	9.8	14,659	114	7.8
Emporia.....	10,842	215	19.8	11,081	154	14.0
Marion.....	21,519	229	10.6	22,009	223	10.1
Marshall.....	21,888	261	11.9	22,288	209	9.4
McPherson.....	21,775	261	12.0	22,972	194	8.5
Meade.....	5,740	44	7.7	5,544	36	6.5
Miami.....	18,592	468	25.2	18,786	353	18.8
Mitchell.....	18,862	177	12.8	18,264	113	8.5
Montgomery, <i>except</i>	23,082	347	15.0	23,829	244	10.5
Coffeyville.....	18,465	232	17.2	16,053	170	10.6
Independence.....	11,505	211	18.3	12,854	150	12.1
Morris.....	12,163	141	11.6	12,049	129	10.7
Morton.....	2,517	49	19.5	2,843	20	8.5
Nemaha.....	18,413	223	12.1	19,381	183	9.5
Neosho, <i>except</i>	13,442	153	11.4	13,000	111	8.5
Chanute.....	10,400	219	21.0	10,588	148	13.9
Ness.....	6,998	54	7.7	7,006	48	6.9
Norton.....	11,398	129	11.3	10,947	106	9.7
Osage.....	20,544	223	10.9	20,028	183	9.1
Osborne.....	12,756	140	11.0	12,423	100	8.0
Ottawa.....	10,805	110	10.2	10,599	108	10.2
Pawnee.....	9,217	99	10.7	8,847	74	8.4
Phillips.....	12,582	107	8.5	12,133	113	9.3
Pottawatomie.....	15,284	218	14.3	15,427	145	9.4
Pratt.....	12,136	130	10.7	12,080	89	7.4
Rawlins.....	6,324	66	10.4	6,149	52	8.5
Reno, <i>except</i>	20,771	212	10.2	21,696	225	10.4
Hutchinson.....	23,401	403	17.2	25,242	277	11.0
Republic.....	16,408	179	10.9	15,876	163	10.3
Rice.....	13,914	203	14.6	14,509	138	9.5
Riley, <i>except</i>	9,723	98	10.1	9,559	72	7.5
Manhattan.....	7,959	156	19.6	7,248	91	12.6
Rooks.....	10,127	84	8.3	10,026	80	8.0
Rush.....	8,139	75	9.2	8,281	43	5.2
Russell.....	11,129	94	8.4	10,604	85	8.0
Saline, <i>except</i>	10,311	112	10.9	10,074	77	7.5
Salina.....	13,278	260	19.6	14,190	208	15.4
Scott.....	3,184	31	9.7	3,093	19	6.1
Sedgwick, <i>except</i>	19,227	173	9.0	20,089	153	7.6
Wichita.....	62,404	1,223	19.6	64,296	993	15.4
Seward.....	6,006	99	16.5	6,239	77	12.3
Shawnee, <i>except</i>	19,591	408	20.8	19,792	374	18.9
Topeka.....	46,741	970	20.8	46,741	756	16.2
Sheridan.....	5,300	36	6.8	5,155	39	7.6
Sherman.....	4,821	46	9.6	5,309	41	7.7
Smith.....	15,025	144	9.6	15,183	119	7.8
Stafford.....	11,272	144	12.8	11,681	108	9.3
Stanton.....	1,016	4	3.9	1,038	6	5.8
Stevens.....	3,331	27	8.1	3,854	40	10.4
Sumner, <i>except</i>	20,770	251	12.1	21,602	171	7.9
Wellington.....	5,507	126	22.9	6,307	97	15.4
Thomas.....	5,008	36	7.2	5,088	42	8.3
Trego.....	6,151	56	9.1	6,012	44	7.3
Wabaunsee.....	11,530	145	12.6	11,556	83	7.2
Wallace.....	2,219	29	13.1	2,167	23	10.6
Washington.....	18,606	211	11.3	17,608	146	8.3
Wichita.....	1,826	13	7.1	1,818	14	7.7
Wilson.....	20,600	281	13.6	20,473	192	9.4
Woodson.....	9,196	111	12.1	9,489	83	8.7
Wyandotte, <i>except</i>	9,547	171	17.9	10,728	129	12.0
Kansas City.....	93,121	2,085	22.3	96,453	1,400	14.7
Rosedale.....	7,584	208	27.4	7,741	111	14.3

TABLE No. 2. Showing comparison of death rates per 1,000 population, by counties, for the five year period, 1915 to 1919, inclusive.

COUNTIES AND CITIES.	Death rate per 1,000 population.				
	1919.	1918.	1917.	1916.	1915.
STATE RATE.....	10.9	15.2	12.0	11.7	10.7
Allen, <i>except</i>	9.0	11.5	11.2	12.4	11.1
Iola.....	11.2	16.5			
Anderson.....	9.9	11.8	10.7	11.3	11.5
Atchison, <i>except</i>	7.1	10.1	10.8	7.2	6.4
Atchison city.....	12.6	14.4	12.6	13.5	12.8
Barber.....	8.7	11.9	7.9	9.1	8.9
Barton, <i>except</i>	9.1	13.7	10.6	9.8	10.8
Great Bend.....	17.5	14.8			
Bourbon, <i>except</i>	8.9	11.8	9.9	9.7	7.3
Fort Scott.....	12.6	18.5	13.3	15.5	14.8
Brown.....	8.1	11.4	10.9	9.9	9.2
Butler, <i>except</i>	5.4	8.1	12.1	11.6	9.5
Augusta.....	17.8	18.6			
El Dorado.....	8.7	18.8			
Chase.....	9.0	12.6	12.2	7.8	11.7
Chautauqua.....	9.4	10.6	10.7	12.0	11.0
Cherokee, <i>except</i>	12.3	16.7	15.5	14.0	12.6
Galena.....	18.1	21.3			
Cheyenne.....	8.1	9.9	7.7	11.0	8.0
Clark.....	9.9	6.5	7.9	8.2	5.8
Clay.....	10.0	12.0	10.9	11.7	9.8
Cloud, <i>except</i>	8.2	12.1	11.9	11.3	9.1
Concordia.....	22.0	31.4			
Coffey.....	9.7	10.4	10.2	9.2	9.8
Comanche.....	9.9	8.8	5.6	5.9	6.7
Cowley, <i>except</i>	8.6	16.0	13.6	12.3	11.4
Arkansas City.....	14.2	18.2			
Winfield.....	15.9	24.3			
Crawford, <i>except</i>	11.4	17.2	12.3	11.2	10.5
Pittsburg.....	10.3	15.1	11.6	13.8	13.0
Decatur.....	8.0	7.7	8.6	10.8	9.5
Dickinson.....	15.1	12.8	10.1	9.3	9.5
Doniphan.....	8.3	9.8	10.1	9.6	10.6
Douglas, <i>except</i>	7.1	13.4	11.2	9.4	7.3
Lawrence.....	11.6	15.1	13.6	13.3	15.6
Edwards.....	6.7	8.3	9.0	10.4	8.9
Elk.....	8.8	10.2	10.1	11.4	9.5
Ellis.....	11.4	14.3	11.1	11.3	8.9
Ellsworth.....	9.5	13.5	9.4	11.0	10.4
Finney.....	10.7	18.8	12.7	14.3	11.8
Ford, <i>except</i>	12.7	12.1	13.2	13.7	10.9
Dodge City.....	14.4	22.5			
Franklin, <i>except</i>	6.4	11.9	13.6	11.3	12.5
Ottawa.....	14.5	15.5			
Geary, <i>except</i>	18.6		31.0	12.1	9.8
Junction City.....	10.5	22.4			
Gove.....	6.2	8.0	8.3	7.7	8.5
Graham.....	8.9	9.0	9.9	10.5	9.8
Grant.....	3.6	5.9	7.3	4.0	11.1
Gray.....	6.6	11.1	8.0	10.3	5.5
Greeley.....	3.3	3.9	8.0	7.5	2.2
Greenwood.....	9.4	11.5	10.4	9.9	9.2
Hamilton.....	15.7	11.9	11.6	17.2	11.6
Harper.....	9.0	10.1	8.4	8.8	9.3
Harvey, <i>except</i>	11.7	10.6	14.3	11.2	11.7
Newton.....	19.4	25.2			
Haskell.....	7.2	6.4	9.8	3.7	12.1
Hodgeman.....	10.3	5.6	6.8	8.4	7.0
Jackson.....	10.4	13.0	11.7	10.4	10.2
Jefferson.....	8.8	12.7	11.5	11.2	11.7
Jewell.....	8.7	10.8	11.8	11.6	7.7
Johnson.....	11.0	15.0	12.5	11.5	10.7
Kearny.....	7.7	11.2	7.7	10.7	9.5
Kingman.....	10.4	11.0	9.5	7.9	8.2
Kiowa.....	6.5	8.0	7.2	9.0	10.2
Labette, <i>except</i>	15.6	13.9	14.6	13.9	11.5
Parsons.....	12.8	16.2	12.5	11.8	16.1
Lane.....	7.0	6.4	9.4	10.9	9.4
Leavenworth, <i>except</i>	22.7	35.8	23.0	24.6	11.2
Leavenworth city.....	12.5	17.5	15.3	14.9	12.6

TABLE No. 2—CONCLUDED. Death rates, 1915 to 1919.

COUNTIES AND CITIES.	Death rate per 1,000 population.				
	1919.	1918.	1917.	1916.	1915.
Lincoln.....	8.3	7.9	8.3	8.7	6.9
Linn.....	10.2	10.4	12.2	10.5	10.2
Logan.....	5.2	6.3	7.0	12.7	10.0
Lyon, <i>except</i>	7.8	9.8	11.5	10.8	11.1
Emporia.....	14.0	19.8			
Marion.....	10.1	10.6	10.1	9.0	9.5
Marshall.....	9.4	11.9	8.9	9.8	8.7
McPherson.....	8.5	12.0	9.4	10.0	10.6
Meade.....	6.5	7.7	11.1	10.3	7.4
Miami.....	18.8	25.2	19.5	19.8	18.1
Mitchell.....	8.5	12.8	11.7	12.1	10.4
Montgomery, <i>except</i>	10.5	15.0	11.6	12.5	10.6
Coffeyville.....	10.6	17.2	14.2	14.2	10.5
Independence.....	12.1	18.3	13.6	13.4	13.4
Morris.....	10.7	11.6	8.8	10.0	8.5
Morton.....	8.5	19.5	4.9	10.3	8.5
Nemaha.....	9.5	12.1	8.3	11.2	10.1
Neosho, <i>except</i>	8.5	11.4	12.3	12.8	9.6
Chanute.....	13.9	21.0			
Ness.....	6.9	7.7	11.3	10.3	11.2
Norton.....	9.7	11.3	10.9	9.6	10.6
Osage.....	9.1	10.9	10.7	10.3	10.5
Osborne.....	8.0	11.0	9.2	8.1	8.9
Ottawa.....	10.2	10.2	9.3	9.0	9.8
Pawnee.....	8.4	10.7	9.2	9.8	10.8
Phillips.....	9.3	8.5	8.7	8.1	8.2
Pottawatomie.....	9.4	14.3	9.6	10.4	8.7
Pratt.....	7.4	10.7	7.2	8.4	8.2
Rawlins.....	8.5	10.4	8.4	11.2	7.4
Reno, <i>except</i>	10.4	10.2	8.0	7.6	6.6
Hutchinson.....	11.0	17.2	12.2	12.4	10.7
Republic.....	10.3	10.9	8.1	9.4	7.6
Rice.....	9.5	14.6	10.6	10.7	9.7
Riley, <i>except</i>	7.5	10.1	12.5	12.1	9.8
Manhattan.....	12.6	19.6			
Rooks.....	8.0	8.8	7.5	7.5	6.3
Rush.....	5.2	9.2	7.7	6.0	7.4
Russell.....	8.0	8.4	8.2	9.6	10.7
Saline, <i>except</i>	7.5	10.9	12.0	12.2	11.8
Salina.....	15.4	19.6			
Scott.....	6.1	9.7	8.5	11.6	7.4
Sedgwick, <i>except</i>	7.6	9.0	10.4	9.8	6.4
Wichita.....	15.4	19.6	15.2	15.4	14.5
Seward.....	12.3	16.5	8.4	11.5	8.9
Shawnee, <i>except</i>	18.9	20.8	20.7	20.7	17.1
Topeka.....	16.2	20.8	16.8	15.0	14.4
Sheridan.....	7.6	6.8	8.1	9.0	6.2
Sherman.....	7.7	9.6	11.1	10.4	7.9
Smith.....	7.8	9.6	8.4	10.6	8.2
Stafford.....	9.3	12.8	7.8	9.1	10.0
Stanton.....	5.8	3.9	7.2	10.2	2.4
Stevens.....	10.4	8.1	9.7	5.8	6.8
Sumner, <i>except</i>	7.9	12.1	10.2	9.8	10.1
Wellington.....	15.4	22.9			
Thomas.....	8.3	7.2	7.0	12.5	9.5
Trego.....	7.3	9.1	7.2	9.0	6.9
Wabaunsee.....	7.2	12.6	8.3	9.5	8.8
Wallace.....	10.6	13.1	9.5	4.9	9.1
Washington.....	8.3	11.3	8.8	9.4	7.5
Wichita.....	7.7	7.1	5.8	8.2	9.9
Wilson.....	9.4	13.6	12.7	10.4	9.7
Woodson.....	8.7	12.1	12.3	10.3	9.6
Wyandotte, <i>except</i>	12.0	17.9	17.5	14.4	13.4
Kansas City.....	14.7	22.3	15.4	14.8	14.7
Rosedale.....	14.3	27.4			

TABLE No. 3A. Showing total deaths, by counties, 1918 (stillbirths not included).

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
STATE TOTALS	2,074	1,807	2,152	1,941	1,719	1,472	1,405	1,654	1,341	4,416	2,846	3,681	26,508
Allen, except Iola	16	8	11	11	15	12	15	11	13	37	16	30	195
Anderson	11	11	13	10	6	10	7	5	9	27	19	26	153
Atchison, except Atchison city	11	13	10	11	11	7	7	17	9	18	12	15	144
Barber	5	9	10	10	10	10	5	5	7	17	10	20	118
Barton, except Great Bend	15	15	14	24	10	13	11	11	8	23	31	44	219
Bourbon, except Fort Scott	8	6	12	12	5	7	5	3	4	14	16	22	114
Brown	9	7	15	18	9	9	12	12	8	14	39	24	176
Butler, except Augusta	1	3	3	11	5	6	5	3	6	4	12	15	74
Chase	12	11	14	15	7	16	7	9	6	17	9	30	153
Chautauqua	18	19	23	23	20	11	13	15	14	30	18	29	228
Cherokee, except Galena	22	21	12	18	19	16	15	11	13	34	25	32	238
Cheyenne	27	20	18	20	16	7	11	9	12	16	19	27	202
Clark	9	6	18	5	4	6	4	5	6	23	6	11	103
Clay	16	12	14	14	8	12	13	16	14	24	35	46	224
Cloud, except Concordia	8	7	8	5	6	5	6	12	3	8	7	9	84
Coffey	12	10	11	7	4	11	8	7	3	18	7	16	114
Comanche	28	31	40	31	39	20	32	31	14	60	78	81	485
Cowley, except Arkansas City	11	8	5	8	6	5	5	7	4	5	23	22	109
Crawford, except Pittsburg	7	4	5	5	3	5	1	3	2	4	4	6	49
Decatur	3	3	2	3	0	3	2	3	1	9	2	2	33
Dickinson	9	7	15	14	16	3	11	15	8	34	10	35	182
Doniphan	10	19	15	11	13	5	11	10	13	18	15	23	163
Douglas, except Lawrence	12	9	10	9	9	11	7	9	7	21	14	16	186
Edwards	43	47	45	57	40	44	36	51	32	103	134	105	787
Elk	21	18	19	20	16	11	14	13	11	37	38	54	272
Ellis	5	3	6	5	7	2	5	15	2	4	5	3	62
Ellsworth	21	24	34	38	19	20	20	21	15	34	32	56	334
Finney	16	9	8	15	11	7	8	13	12	19	21	23	162
Ford, except Dodge City	11	6	11	6	2	10	6	10	6	41	14	19	142
Franklin, except Ottawa	13	12	22	23	18	5	6	16	12	22	17	37	203
	3	4	4	5	3	0	1	7	2	4	9	15	57
	12	7	9	8	4	5	6	8	10	8	13	14	104
	10	9	15	9	8	11	7	11	12	72	11	23	198
	8	11	11	10	15	11	7	9	7	18	10	20	137
	10	3	10	7	8	10	6	5	8	6	46	21	140
	11	11	13	8	3	11	8	9	5	15	9	12	115
	6	9	8	8	12	5	10	9	4	9	12	16	108
	12	17	15	10	10	10	10	11	11	14	14	30	164
	13	5	10	8	13	14	5	12	5	25	18	19	147

Geary, except	58	22	67	46	34	17	23	11	30	954	51	54	1,367
Junction City	18	13	22	9	13	10	4	6	15	31	29	21	191
Gove	4	2	1	3	3	4	3	2	2	6	4	3	37
Graham	8	2	5	5	2	2	1	4	7	7	10	11	65
Grant		1	1	1	0	1							6
Gray	4	6	2	5	0	4	4	5	0	7	7	7	51
Greeley	1	0	0	1	0	0	0	0	0	0	0	2	4
Greenwood	13	18	12	17	9	8	14	9	7	19	27	24	172
Hamilton	2	0	9	0	0	1	2	2	0	8	4	2	30
Harper	9	10	8	19	9	8	9	9	5	11	15	16	128
Harvey, except	8	11	10	8	9	3	6	8	9	10	10	20	112
Newton	22	15	16	16	10	7	11	10	10	54	14	23	207
Haskell	1	1	0	1	3	3	0	0	0	1	0	1	11
Hodgeman	2	2	3	0	3	1	0	0	1	2	1	6	21
Jackson	18	11	16	24	10	11	10	12	11	20	17	31	191
Jefferson	23	15	23	15	11	13	7	9	9	14	15	38	192
Jewell	13	19	14	14	7	11	10	12	10	38	12	17	172
Johnson	23	26	17	15	19	19	12	20	19	24	35	28	257
Kearny	1	1	3	1	1	0	1	10	3	0	4	4	29
Kingman	7	9	13	6	10	16	8	3	8	14	14	16	124
Kiowa	3	7	4	3	1	5	4	2	1	6	7	7	50
Labette, except	27	20	23	29	27	16	13	26	23	45	35	57	341
Parsons	27	25	23	39	15	20	5	13	13	44	29	27	280
Lane	1	2	3	1	1	0	0	1	2	3	1	1	16
Leavenworth, except	62	46	68	52	42	39	27	27	36	168	51	71	689
Leavenworth city	24	26	46	29	35	29	28	28	20	28	40	54	382
Lincoln	7	13	10	7	3	2	3	3	5	6	8	12	79
Linn	16	11	11	8	10	9	13	10	9	21	10	29	157
Logan	3	4	3	2	0	1	1	2	1	1	1	3	22
Lyon, except	13	13	14	9	18	9	6	14	5	18	10	24	148
Emporia	15	16	25	18	9	12	8	16	8	25	30	38	215
Marion	20	16	16	16	19	11	10	13	10	31	26	41	229
Marshall	27	23	29	13	16	12	20	17	21	30	21	32	261
McPherson	34	24	21	15	17	9	22	16	14	26	20	43	261
Meade	4	4	2	8	4	1	6	2	3	5	3	2	44
Miami	29	26	41	31	30	21	23	40	24	72	84	47	468
Mitchell	24	13	11	11	18	12	6	16	12	15	22	17	177
Montgomery, except	31	14	20	19	33	16	17	19	25	51	54	48	347
Coffeyville	21	19	14	10	19	13	13	15	14	35	24	35	232
Independence	14	16	11	11	17	13	12	11	4	27	38	37	211
Morris	15	11	13	20	7	4	9	6	7	11	15	23	141
Morton	3	2	6	4	1	1	4	4	0	2	14	8	49
Nemaha	11	17	19	18	16	24	12	15	13	24	25	29	223
Neosho, except	17	13	13	7	11	12	11	10	10	14	16	19	153
Chanute	14	14	15	12	15	7	10	17	17	63	22	13	219
Ness	4	3	3	4	5	3	2	5	6	2	5	13	54
Norton	11	9	8	10	9	5	16	8	14	15	11	13	129
Osage	14	20	24	19	15	17	21	16	9	20	15	33	223
Osborne	11	10	13	9	7	13	10	3	8	21	21	14	140

TABLE No. 8A—CONCLUDED. Deaths by months, 1918.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Ottawa.....	13	6	13	12	8	5	7	5	1	12	12	16	110
Pawnee.....	10	9	11	6	5	8	10	7	7	8	9	9	99
Phillips.....	3	13	15	7	10	3	9	6	6	9	8	18	107
Pottawatomie.....	20	18	16	17	15	13	13	15	15	17	22	37	218
Pratt.....	11	9	5	7	10	7	6	3	6	21	18	27	130
Rawlins.....	2	5	4	6	3	8	5	4	2	5	12	10	66
Reno, except.....	22	11	9	13	11	14	13	19	8	20	23	49	212
Hutchinson.....	30	25	28	12	30	24	26	28	16	51	65	68	403
Republic.....	16	11	15	19	13	6	7	10	7	22	25	28	179
Rice.....	15	21	21	10	12	16	10	11	6	29	20	32	203
Riley, except.....	8	8	12	5	11	9	3	5	3	10	11	13	98
Manhattan.....	9	15	16	9	11	8	8	14	5	27	12	22	153
Rooks.....	9	7	8	7	14	1	6	5	5	5	8	9	84
Rush.....	7	2	4	4	6	6	2	6	2	20	5	11	76
Russell.....	11	4	2	10	5	3	2	7	8	11	16	15	94
Saline, except.....	11	6	10	9	9	5	8	8	5	7	16	18	112
Salina.....	16	15	18	13	15	14	18	18	10	38	37	48	260
Scott.....	1	0	5	2	2	4	1	3	2	1	7	3	31
Sedgewick, except.....	13	8	19	17	16	10	8	14	10	13	14	31	173
Wichita.....	91	79	107	87	74	68	78	78	64	185	151	166	1,228
Seward.....	4	11	8	20	4	5	4	5	2	6	11	19	99
Shawnee, except.....	44	28	36	32	33	27	19	37	25	43	33	51	403
Topoka.....	77	76	78	83	67	59	60	62	67	154	85	102	970
Sheridan.....	1	5	5	1	2	3	4	0	3	4	5	3	36
Sherman.....	4	2	3	1	3	1	1	2	1	15	7	5	45
Smith.....	18	11	10	9	9	10	5	10	6	15	25	16	144
Stafford.....	8	14	14	11	13	7	10	10	8	15	22	17	144
Stanton.....	1	0	0	0	1	1	0	0	0	0	0	1	4
Stevens.....	2	2	0	2	0	2	0	1	1	2	5	10	27
Sumner, except.....	18	27	24	17	11	12	16	20	18	28	24	36	251
Wellington.....	9	5	9	3	11	11	6	12	8	11	21	20	126
Thomas.....	3	1	4	3	3	1	1	5	1	1	2	6	36
Trego.....	3	6	3	2	6	2	2	7	4	5	3	13	56
Wabaunsee.....	20	16	18	15	14	10	8	7	10	12	5	10	145
Wallace.....	4	1	1	1	3	1	2	4	2	1	5	4	29
Washington.....	17	18	12	12	18	6	18	19	9	31	21	30	211
Wichita.....	0	0	1	0	0	1	2	2	2	0	2	3	13
Wilson.....	23	18	16	26	22	17	18	19	18	26	34	44	281
Woodson.....	8	5	11	10	10	12	2	10	9	12	7	15	111
Wyandotte, except.....	17	9	11	9	10	11	10	11	11	24	20	28	171
Kansas City.....	171	155	183	153	128	115	109	124	89	420	176	262	2,085
Rosedale.....	19	8	14	19	12	10	9	13	9	42	14	39	208

TABLE No. 3B. Showing total deaths by counties, by months, 1919 (stillbirths not included).

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
STATE TOTALS.....	2,204	1,907	2,409	1,629	1,420	1,247	1,379	1,267	1,275	1,402	1,406	1,702	19,247
Allen, except.....	11	22	20	11	14	10	11	11	5	6	13	11	145
Iola.....	10	8	14	7	4	6	15	10	7	10	8	7	106
Anderson.....	11	16	15	13	14	5	2	7	7	4	9	20	123
Atchison, except.....	6	11	6	7	6	5	6	12	0	10	8	11	88
Atchison city.....	22	20	25	20	17	15	14	9	14	12	14	12	194
Barber.....	11	6	7	10	9	7	6	9	10	3	3	9	90
Barton, except.....	9	12	27	13	10	9	4	7	2	7	9	12	121
Great Bend.....	10	10	4	6	9	6	2	5	3	10	11	5	81
Bourbon, except.....	15	5	13	15	9	7	6	10	4	7	6	16	113
Fort Scott.....	15	5	14	16	13	17	14	13	12	11	13	19	162
Brown.....	17	19	19	26	16	10	7	15	9	16	12	6	172
Butler, except.....	23	12	12	5	8	8	9	12	7	12	9	13	140
Augusta.....	17	6	6	9	3	3	5	6	7	3	5	7	77
El Dorado.....	18	17	11	14	10	10	8	10	5	7	11	13	134
Chase.....	5	6	7	2	5	7	5	7	6	4	6	2	62
Chautauqua.....	19	9	9	7	7	12	5	2	7	5	8	12	102
Cherokee, except.....	37	40	33	38	32	20	24	22	27	32	27	34	371
Galena.....	15	12	10	4	9	2	3	8	9	6	4	2	89
Cheyenne.....	3	3	9	4	2	2	2	3	2	3	4	5	44
Clark.....	5	3	9	9	1	4	2	3	3	4	4	4	51
Clay.....	23	15	18	16	12	10	13	5	6	14	11	9	152
Cloud, except.....	11	10	9	14	10	6	7	9	7	13	5	10	111
Concordia.....	7	10	8	9	10	5	8	6	12	10	8	6	99
Coffey.....	19	18	19	14	10	9	15	11	4	9	6	12	146
Comanche.....	4	2	13	2	1	0	2	7	4	5	3	7	50
Cowley, except.....	20	14	21	11	12	9	14	8	9	8	7	8	141
Arkansas City.....	15	24	14	16	15	6	9	16	8	8	11	10	152
Winfield.....	10	12	12	15	4	15	10	8	11	12	9	14	132
Crawford, except.....	55	45	62	36	39	38	31	39	30	44	22	42	433
Pittsburg.....	34	23	37	11	8	6	5	13	7	10	15	15	184
Decatur.....	8	2	6	6	13	6	5	5	2	4	3	4	64
Dickinson.....	33	31	41	19	22	19	18	10	18	25	20	25	236
Doniphan.....	22	13	19	10	7	10	8	8	7	7	10	9	130
Douglas, except.....	6	10	13	12	5	7	5	4	9	3	3	6	83
Lawrence.....	12	17	18	8	16	15	6	11	17	13	12	15	155
Edwards.....	5	6	6	3	2	1	6	2	3	5	2	3	44
Elk.....	15	7	10	11	4	2	7	6	2	6	12	9	91
Ellis.....	12	17	19	15	9	12	14	16	10	11	17	10	162
Ellsworth.....	12	7	9	3	7	3	10	6	6	9	9	10	96
Finney.....	13	10	12	4	6	6	5	8	5	5	5	9	88
Ford, except.....	6	14	21	12	3	11	9	13	2	7	6	12	116
Dodge City.....	3	1	5	4	7	3	9	1	5	6	13	10	67
Franklin, except.....	11	18	10	5	4	3	7	4	2	4	9	11	83
Ottawa.....	23	11	13	8	13	13	9	13	3	5	12	10	133

TABLE No. 3B—CONCLUDED. Deaths by months, 1919.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Geary, except Junction City	41	12	14	12	8	6	4	7	1	4	4	3	116
Gove	6	15	12	5	4	4	6	2	4	5	7	5	75
Graham	4	5	1	0	3	2	2	3	5	3	1	2	31
Grant	11	8	5	5	1	4	9	4	0	3	5	4	64
Gray	0	3	1	0	0	0	0	0	2	0	0	3	4
Greeley	1	4	5	2	2	1	1	0	0	0	5	0	28
Greenwood	1	1	0	0	1	0	0	0	0	0	1	0	4
Hamilton	20	20	12	12	9	5	8	8	7	12	16	12	141
Harper	5	2	9	3	3	1	1	4	3	10	0	5	39
Harvey, except	16	12	15	16	13	7	11	5	4	8	5	9	123
Harvey	13	14	15	7	11	5	8	12	13	8	12	9	127
Haskell	15	19	29	16	10	9	11	9	9	8	13	12	160
Hodgeman	0	7	1	0	0	0	2	1	0	0	0	0	11
Hodgeman	7	2	6	0	1	1	1	2	6	2	2	7	37
Jackson	17	23	17	18	8	9	5	13	10	16	6	14	156
Jefferson	17	17	27	15	9	4	6	8	3	8	7	11	132
Jewell	15	10	16	14	17	9	11	1	12	11	10	13	139
Johnson	16	13	15	15	13	12	13	15	17	21	9	27	191
Kearny	2	1	0	1	4	2	4	1	1	1	2	1	20
Kingman	9	10	22	13	8	6	10	10	5	10	12	6	121
Kiowa	4	7	2	4	5	5	2	0	0	5	3	3	40
Labette, except	37	26	27	16	23	15	20	15	13	30	24	28	274
Parsons	28	14	29	21	9	20	10	14	13	22	16	14	210
Lane	1	2	1	1	1	1	1	1	1	2	0	5	17
Leavenworth, except	39	38	63	51	35	31	29	26	23	27	33	40	445
Leavenworth city	23	20	42	17	22	24	18	14	19	26	21	28	274
Lincoln	8	6	10	7	6	8	8	2	6	4	8	10	83
Linn	13	11	22	16	13	7	16	10	11	12	11	15	157
Logan	4	0	3	2	1	0	3	2	0	0	2	0	17
Lyon, except	10	10	19	9	8	6	8	7	9	8	12	8	114
Emporia	13	11	15	6	12	12	16	20	10	15	12	12	154
Marion	40	21	41	13	12	15	19	7	8	18	16	13	223
Marshall	20	30	31	17	9	13	17	9	12	12	20	19	209
McPherson	21	15	29	19	16	11	13	14	13	12	10	21	194
Meade	4	1	5	3	0	5	4	2	3	3	3	3	36
Miami	47	26	38	23	30	28	28	22	27	24	28	32	353
Mitchell	12	10	15	9	10	8	9	7	10	7	10	6	113
Montgomery, except	20	28	24	23	20	15	17	18	23	13	14	29	244
Coffeyville	31	16	23	15	7	12	16	8	9	7	8	18	170
Independence	10	14	13	11	12	10	14	11	9	14	17	15	150
Morris	12	5	25	9	8	6	6	11	12	7	18	10	129
Morton	2	2	6	3	2	2	1	0	0	1	0	1	20
Nemaha	24	17	22	14	15	13	10	16	16	12	10	14	183

Neosho, except	19	16	10	7	3	10	6	7	8	3	9	13	111
Chanute	18	15	21	11	12	11	9	7	7	12	8	19	148
Ness	8	7	2	4	2	3	3	2	2	2	4	5	48
Norton	14	9	6	3	10	8	11	5	5	9	12	10	106
Osgo	19	13	28	17	12	7	11	13	12	10	17	24	183
Osborne	8	8	20	9	7	6	5	5	6	8	5	8	100
Ottawa	13	10	17	6	6	3	7	3	7	8	11	9	108
Pawnee	8	7	7	6	3	3	6	8	6	9	4	8	74
Phillips	17	13	10	8	14	3	10	8	7	4	5	12	113
Pottawatomie	21	17	15	14	15	5	8	5	11	13	7	12	145
Pratt	5	11	15	6	5	10	10	4	4	7	5	12	89
Rawlins	3	5	6	8	9	4	4	1	3	5	2	4	52
Reno, except	28	17	49	17	16	18	18	8	9	18	13	18	225
Hutchinson	22	31	48	18	16	20	20	20	27	19	19	20	277
Republic	21	17	23	16	16	14	14	11	8	8	9	11	163
Rice	14	21	20	9	9	10	11	11	12	7	5	9	138
Riley, except	8	5	11	5	8	5	4	5	5	5	3	8	72
Manhattan	18	6	12	10	6	9	8	8	4	3	11	1	91
Rooks	6	4	11	7	6	6	11	6	3	5	3	12	80
Rush	3	6	5	5	4	4	0	0	6	2	2	6	43
Russell	13	5	16	12	4	2	6	2	2	8	6	9	85
Saline, except	9	8	12	7	6	1	5	7	3	8	5	6	77
Salina	12	15	28	20	13	14	23	11	21	18	18	20	208
Scott	1	1	3	2	1	2	0	2	2	3	2	0	19
Sedgwick, except	15	18	13	18	12	13	15	7	15	9	5	13	153
Wichita	101	180	118	71	59	56	63	69	93	63	84	81	993
Seward	4	8	9	6	8	5	8	6	4	7	5	7	77
Shawnee, except	61	19	38	26	31	27	33	25	32	33	26	23	374
Topeka	80	70	82	65	72	49	53	48	52	53	63	69	756
Sheridan	8	2	1	2	5	3	1	3	4	6	2	2	39
Sherman	3	9	6	2	1	2	1	6	6	3	1	1	41
Smith	13	15	10	10	8	8	5	13	15	9	8	5	119
Stafford	4	12	21	7	5	10	7	5	9	7	10	11	108
Stanton	1	0	2	0	0	0	0	0	0	0	1	1	6
Stevens	4	4	4	4	5	2	6	4	0	4	1	2	40
Sumner, except	29	9	18	15	13	11	10	9	18	11	14	14	171
Wellington	12	10	9	5	7	4	9	6	10	7	7	11	97
Thomas	9	3	4	8	1	0	3	4	2	5	2	1	42
Trego	5	4	3	1	3	8	4	1	3	5	1	6	44
Wabaunsee	10	5	9	8	6	5	10	4	7	6	3	10	83
Wallace	9	5	1	2	2	0	0	1	1	0	1	1	23
Washington	14	23	9	9	12	14	7	8	12	17	10	11	146
Wichita	4	1	0	1	1	0	1	0	1	2	0	3	14
Wilson	22	20	32	13	8	6	13	11	14	16	16	21	192
Woodson	16	4	11	8	12	5	4	6	4	7	7	5	83
Wyandotte, except	12	14	14	14	10	9	10	10	8	10	5	13	129
Kansas City	148	132	167	135	92	97	99	101	83	104	106	136	1,400
Rosedale	10	17	16	9	6	4	11	2	8	6	11	11	111

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TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Diphtheria.				Tuberculosis (all forms).				Cancer (all forms).				Diabetes.			
	1918.		1919.		1918.		1919.		1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
	130	7.5	191	10.8	1,089	59.9	894	50.8	1,267	73.1	1,228	69.7	254	14.7	253	14.7
STATE TOTALS.....	130	7.5	191	10.8	1,089	59.9	894	50.8	1,267	73.1	1,228	69.7	254	14.7	253	14.7
Allen, except.....	1	5.9	.....	.....	7	41.3	7	43.4	17	100.0	10	61.7	1	5.9	1	6.2
Iola.....	2	21.5	.....	.....	13	140.0	4	42.2	10	107.8	16	168.8	.....	.....	.....	.....
Anderson.....	.....	.....	.....	.....	4	32.7	7	56.1	8	65.2	6	48.1	.....	.....	.....	.....
Atchison, except.....	1	8.5	3	24.1	8	68.2	2	16.1	5	42.7	7	56.3	4	32.7	2	16.0
Atchison city.....	3	19.7	2	13.1	17	111.6	4	26.1	13	85.2	17	111.8	3	17.1	3	24.1
Barber.....	.....	.....	.....	.....	7	73.1	2	19.5	3	31.3	9	87.6	.....	.....	.....	.....
Barton, except.....	.....	.....	1	7.6	4	31.1	5	37.7	12	98.4	6	45.3	.....	.....	.....	.....
Great Bend.....	.....	.....	1	21.7	3	59.9	2	43.4	5	99.9	3	65.0	.....	.....	.....	.....
Bourbon, except.....	1	7.8	.....	.....	2	15.5	5	39.4	6	46.5	5	39.4	.....	.....	.....	.....
Fort Scott.....	.....	.....	.....	.....	4	32.5	8	62.4	12	97.4	20	155.9	7	15.5	8	23.6
Brown.....	1	4.8	1	4.7	12	57.4	9	42.4	12	57.4	9	42.4	4	56.8	.....	.....
Butler, except.....	1	4.2	3	11.6	5	20.1	4	15.5	4	16.1	8	31.0	2	19.1	4	18.7
Augusta.....	1	13.0	.....	.....	3	54.0	7	161.5	5	90.0	3	69.2	.....	.....	.....	.....
El Dorado.....	2	12.3	2	13.1	7	43.1	6	39.2	4	24.6	2	13.1	.....	.....	.....	.....
Chase.....	1	15.1	1	14.4	5	75.3	1	14.4	7	105.4	6	86.7	2	30.1	1	14.4
Chautauquis.....	1	18.5	2	18.4	6	55.6	1	9.2	4	37.1	4	36.7	.....	.....	.....	.....
Cherokee, except.....	1	3.4	3	9.4	13	44.7	17	53.5	21	72.1	15	47.4	4	13.7	2	6.3
Galena.....	.....	.....	.....	.....	9	175.6	9	182.6	4	78.0	6	121.7	.....	.....	.....	.....
Cheyenne.....	.....	.....	1	18.5	1	20.2	1	18.5	1	20.2	3	55.4	.....	.....	.....	.....
Clark.....	.....	.....	.....	.....	2	39.6	2	38.7	4	79.2	2	38.7	.....	.....	.....	.....
Clay.....	.....	.....	6	39.4	5	32.9	1	6.6	13	85.6	17	112.6	2	13.2	1	6.6
Cloud, except.....	.....	.....	2	14.8	1	7.4	4	29.6	13	96.4	9	66.7	1	7.4	3	22.2
Concordia.....	.....	.....	.....	.....	4	92.6	.....	.....	10	231.3	12	266.8	3	69.4	4	88.9
Coffey.....	.....	.....	.....	.....	7	45.7	6	39.8	13	84.8	12	79.8	.....	.....	.....	.....
Comanche.....	1	18.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cowley, except.....	.....	.....	.....	.....	11	78.8	2	39.6	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas City.....	.....	.....	.....	.....	10	102.3	13	79.6	7	50.2	10	61.2	.....	.....	.....	.....
Winfield.....	.....	.....	.....	.....	6	82.3	6	56.1	6	61.4	16	149.5	1	10.2	1	9.3
Crawford, except.....	.....	.....	2	24.0	21	49.1	7	84.1	16	219.5	6	72.1	1	13.7	2	24.0
Pittsburg.....	2	11.1	2	4.7	9	49.9	18	42.5	25	57.2	20	47.5	6	14.0	6	14.2
Decatur.....	.....	.....	.....	.....	1	12.5	6	33.4	12	66.5	8	44.6	1	5.5	1	5.6
Dickinson.....	.....	.....	1	12.5	1	12.5	2	25.0	5	62.4	3	37.5	.....	.....	.....	.....
Doniphan.....	.....	.....	2	7.7	9	34.4	4	15.5	24	91.9	15	58.0	7	26.8	4	50.0
Douglas, except.....	1	6.2	4	25.7	8	43.4	4	25.7	9	49.6	9	57.8	2	12.4	6	23.2
Lawrence.....	.....	.....	.....	.....	5	43.0	4	34.3	9	77.4	6	51.4	1	8.6	1	8.6
Edwards.....	.....	.....	2	14.9	9	66.8	10	74.7	17	126.3	15	113.0	1	7.4	1	7.5
Elk.....	.....	.....	1	15.2	.....	.....	2	30.4	2	29.1	2	30.4	.....	.....	.....	.....
Ellis.....	.....	.....	2	19.3	.....	.....	1	9.7	2	19.6	5	48.4	4	39.2	2	19.3
Ellsworth.....	.....	.....	1	7.1	4	23.9	6	42.3	5	36.1	8	56.4	.....	.....	2	14.1
.....	.....	.....	.....	.....	3	29.6	3	29.5	12	118.8	11	109.1	1	9.9	1	9.9

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Diphtheria.				Tuberculosis (all forms).				Cancer (all forms).				Diabetes.			
	1918.		1919.		1918.		1919.		1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Finney.....	.....	.....	.....	.....	4	53.8	7	85.4	3	40.4	5	61.0	4	53.8	.....	.....
Ford, <i>except</i>.....	.....	.....	1	10.9	3	31.6	3	2.8	3	31.6	4	43.8	1	10.5	.....	.....
Dodge City.....	1	20.8	1	21.5	6	125.0	5	107.6	5	104.2	4	86.1	2	41.6	3	64.6
Franklin, <i>except</i>.....	.....	.....	.....	.....	3	21.7	5	36.2	9	65.2	7	50.6	1	7.2	.....	.....
Ottawa.....	.....	.....	3	31.5	2	21.1	3	31.5	10	105.4	14	146.9	.....	.....	2	21.0
Geary, <i>except</i>	7	116.8	1	16.0	20	466.0	16	256.8	4	98.3	2	32.1	1	28.3	1	16.0
Junction City.....	1	11.8	2	28.1	4	46.8	3	42.2	6	70.2	4	56.2	.....	.....	2	28.1
Gove.....	1	21.5	1	20.1	.....	.....	.....	.....	1	21.5	1	20.1	.....	.....	.....	.....
Graham.....	.....	.....	.....	.....	2	27.8	2	28.0	4	55.6	7	97.8	1	18.9	.....	.....
Grant.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gray.....	.....	.....	.....	.....	3	65.4	.....	.....	1	21.8	2	47.5	1	21.8	.....	.....
Greeley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenwood.....	1	6.7	6	39.9	9	59.8	8	53.3	8	53.2	16	106.6	3	19.9	1	6.7
Hamilton.....	.....	.....	.....	.....	3	118.2	.....	.....	1	39.4	1	40.4	.....	.....	.....	.....
Harper.....	.....	.....	1	7.3	1	7.9	3	22.0	5	39.4	11	80.9	2	15.8	1	7.3
Harvey, <i>except</i>	2	18.9	.....	.....	3	28.4	5	46.2	5	47.5	11	101.6	1	9.5	4	37.0
Newton.....	.....	.....	3	36.3	11	134.5	8	96.9	9	110.0	10	121.3	.....	.....	3	36.8
Haskell.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hodgeman.....	.....	.....	.....	.....	.....	.....	.....	.....	1	26.8	2	55.9	.....	.....	.....	.....
Jackson.....	1	6.8	1	6.7	10	60.8	7	46.6	6	40.9	8	53.3	1	6.8	2	13.3
Jefferson.....	1	6.6	1	6.6	4	26.5	2	13.3	5	33.2	13	86.4	.....	.....	2	13.3
Jewell.....	.....	.....	1	6.2	6	37.6	1	6.2	17	106.5	8	50.0	.....	.....	2	12.5
Johnson.....	1	5.8	2	11.6	13	75.9	8	46.2	20	116.7	17	98.2	3	17.5	5	28.9
Kearny.....	1	38.6	.....	.....	2	77.1	2	77.1	.....	.....	3	115.6	1	8.8	1	38.5
Kingman.....	.....	.....	1	8.6	3	26.5	2	17.2	7	61.9	6	51.6	.....	.....	4	34.4
Kiowa.....	.....	.....	.....	.....	3	47.8	2	16.2	5	79.6	2	32.4	.....	.....	.....	.....
Labette, <i>except</i>	1	5.6	1	5.7	13	72.5	1	56.7	15	83.6	13	73.7	2	11.2	3	17.0
Parsons.....	1	5.8	1	6.1	20	115.7	14	85.2	9	52.1	14	85.2	1	5.8	2	12.2
Lane.....	.....	.....	.....	.....	1	40.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leavenworth, <i>except</i>	5	25.9	6	30.6	22	114.1	10	50.9	17	88.1	13	66.3	.....	.....	1	5.1
Leavenworth city.....	4	18.3	6	27.2	13	59.4	10	45.4	15	68.6	25	113.6	5	22.9	2	9.1
Lincoln.....	.....	.....	.....	.....	1	10.0	5	49.9	6	60.0	11	110.0	1	10.0	2	20.0
Linn.....	.....	.....	4	25.9	2	13.3	3	19.5	16	106.1	6	38.9	3	19.9	1	6.5
Logan.....	2	56.8	.....	.....	.....	.....	1	30.5	.....	.....	.....	.....	2	56.8	.....	.....
Lyon, <i>except</i>	2	13.2	2	13.6	3	19.9	5	34.1	4	26.4	8	20.5	3	13.2	3	20.5
Emporia.....	4	36.9	.....	.....	13	120.0	5	45.3	18	166.0	7	63.4	4	36.9	.....	.....
Marion.....	.....	.....	5	22.7	10	46.5	7	31.8	15	69.7	11	50.0	3	13.9	2	9.1
Marshall.....	.....	.....	3	13.5	5	22.9	5	22.5	7	32.0	12	54.0	4	13.3	6	27.0
McPherson.....	1	4.6	.....	.....	7	32.1	3	13.1	20	91.9	22	95.8	3	37.6	4	17.4
Meade.....	.....	.....	.....	.....	4	69.7	1	18.0	4	69.7	1	18.0	.....	.....	.....	.....
Miami.....	2	10.8	1	5.3	27	145.3	31	165.0	14	75.4	11	58.6	.....	.....	2	10.6

Mitchell.....	1	7.2	1	7.5	4	28.8	2	15.1	10	72.0	6	45.2	1	7.2	.....	5	.....	21.4
Montgomery, except Coffeyville.....	2	14.9	3	12.9	15	65.0	6	25.7	8	34.7	11	47.3	3	18.0	.....	4	.....	24.9
Independence.....	1	8.7	4	32.3	12	104.8	5	40.5	7	60.8	9	72.8	2	17.4	.....	2	.....	16.2
Morris.....	.....	.....	3	24.9	3	24.6	6	49.8	10	82.2	13	107.8	1	8.2	.....	1	.....	8.3
Morton.....	.....	.....	.....	.....	.....	.....	1	42.4	.....	.....	1	42.4	.....	.....	.....	.....	.....	.....
Nemaha.....	.....	.....	5	25.8	10	54.8	6	30.9	14	76.0	16	82.6	7	38.0	.....	3	.....	15.5
Neosho, except Chanute.....	1	9.6	.....	.....	9	67.0	6	46.1	9	67.0	5	38.4	2	14.9	.....	2	.....	15.4
Neos.....	.....	.....	.....	.....	8	76.9	12	114.0	9	86.6	16	152.2	2	19.2	.....	1	.....	9.5
Norton.....	.....	.....	.....	.....	1	14.8	.....	.....	3	42.8	2	28.6	1	8.8	.....	1	.....	14.8
Oaage.....	.....	.....	.....	.....	9	78.9	11	100.6	9	78.9	9	82.2	1	8.8	.....	2	.....	82.2
Osborne.....	3	28.5	.....	10.0	7	27.9	7	34.9	13	51.9	14	69.9	2	8.0	.....	2	.....	10.0
Ottawa.....	.....	.....	.....	.....	3	28.5	4	32.2	13	101.8	9	72.4	1	7.8	.....	1	.....	.....
Pawnee.....	.....	.....	.....	.....	8	27.7	4	37.8	4	37.0	9	84.9	4	37.0	.....	3	.....	28.3
Phillips.....	2	15.9	.....	11.8	7	55.8	5	41.2	7	76.0	2	22.6	1	10.9	.....	1	.....	11.8
Pottawatomie.....	3	19.6	.....	.....	8	52.4	6	38.9	16	104.8	9	74.2	3	19.6	.....	3	.....	24.7
Pratt.....	.....	.....	.....	.....	6	49.5	1	8.3	5	41.2	11	71.4	2	16.5	.....	4	.....	25.9
Rawlins.....	.....	.....	.....	.....	2	31.7	2	32.5	3	47.5	9	74.8	2	31.7	.....	1	.....	8.8
Reno, except Hutchinson.....	1	4.3	.....	9.2	2	53.0	5	23.1	12	57.8	4	65.0	7	33.7	.....	8	.....	13.8
Republic.....	.....	.....	.....	7.9	11	77.0	15	59.4	28	119.7	12	55.3	3	12.8	.....	1	.....	89.6
Rice.....	1	7.2	.....	13.8	4	24.4	8	50.5	16	97.4	13	82.1	4	24.4	.....	2	.....	12.6
Riley, except Manhattan.....	1	10.3	.....	10.5	4	28.7	5	34.4	14	100.6	10	68.9	2	14.4	.....	1	.....	6.9
Rooks.....	2	25.1	.....	.....	4	41.3	1	10.5	2	21.0	6	62.8	1	10.8	.....	1	.....	10.5
Rush.....	1	12.3	.....	36.2	1	12.3	2	27.6	3	37.7	7	96.7	2	25.1	.....	2	.....	79.8
Russell.....	.....	.....	.....	28.3	2	18.0	4	39.9	4	39.5	6	59.8	.....	.....	.....	8	.....	12.1
Saline, except Salina.....	.....	.....	.....	49.3	2	19.4	1	9.4	8	49.2	2	24.2	.....	.....	.....	1	.....	9.4
Scott.....	1	31.4	.....	.....	10	75.4	8	56.4	13	77.5	2	19.8	3	29.1	.....	3	.....	29.7
Sedgwick, except Wichita.....	.....	.....	.....	.....	2	62.8	2	64.7	1	81.4	8	105.7	5	37.6	.....	.....	.....	.....
Seward.....	1	16.7	.....	5.0	9	46.8	5	24.9	3	41.6	8	39.9	2	62.8	.....	2	.....	10.0
Shawnee, except Topeka.....	10	21.4	.....	6.2	59	94.6	63	97.6	80	128.2	75	116.2	10	16.0	.....	18	.....	27.9
Sheridan.....	2	37.8	.....	15.2	5	83.4	2	32.0	4	66.6	4	64.1	4	20.4	.....	3	.....	16.0
Sherman.....	.....	.....	.....	6.4	46	234.8	30	151.5	14	71.5	11	55.6	.....	113.3	.....	1	.....	15.2
Smith.....	1	18.8	.....	.....	35	74.9	48	102.7	53	113.4	54	115.6	2	37.8	.....	12	.....	25.7
Stafford.....	1	8.9	.....	18.8	1	83.0	3	58.3	3	56.6	2	38.8	2	13.3	.....	1	.....	19.4
Stanton.....	.....	.....	.....	8.5	4	83.0	1	18.8	3	62.2	1	18.8	.....	.....	.....	2	.....	13.2
Stevens.....	.....	.....	.....	.....	5	33.3	1	6.6	6	39.9	5	32.9	.....	13.3	.....	2	.....	17.1
Sumner, except Wellington.....	4	19.3	.....	.....	7	62.1	7	59.9	3	26.6	9	77.0	.....	.....	.....	.....	.....	.....
Thomas.....	1	20.0	.....	4.6	1	30.0	3	73.4	.....	.....	1	26.1	.....	.....	.....	1	.....	26.1
Trego.....	.....	.....	.....	.....	6	28.9	10	46.3	13	62.7	8	37.0	3	14.5	.....	3	.....	13.9
Wabaunsee.....	.....	.....	.....	58.9	11	200.0	6	95.1	12	218.0	8	126.8	1	18.1	.....	.....	.....	.....
Wallace.....	.....	.....	.....	.....	2	40.0	1	16.6	1	20.0	1	19.6	1	20.0	.....	1	.....	19.6
Washington.....	3	16.1	.....	17.3	4	34.7	1	34.6	2	32.5	1	16.6	3	26.0	.....	2	.....	17.3
Wichita.....	.....	.....	.....	.....	1	45.1	4	17.0	9	78.0	6	43.2	.....	.....	.....	.....	.....	.....
Wilson.....	1	4.9	.....	.....	6	32.3	8	17.0	2	90.2	2	92.3	1	5.4	.....	3	.....	17.0
Woodson.....	.....	.....	.....	.....	1	54.7	.....	.....	.....	48.3	14	79.5	.....	.....	.....	.....	.....	.....
Wyandotte, except Kansas City.....	3	31.4	.....	24.4	8	38.8	12	58.6	11	53.4	12	58.6	1	4.9	.....	5	.....	24.4
Rosedale.....	17	18.2	.....	10.5	1	10.9	2	21.0	6	65.3	2	21.0	4	43.5	.....	.....	.....	.....
.....	.....	.....	.....	23.9	5	52.4	7	65.3	8	83.7	7	65.3	1	10.4	.....	1	.....	9.8
.....	.....	.....	.....	.....	185	144.7	128	132.8	86	92.2	67	69.4	8	8.6	.....	16	.....	16.6
.....	.....	.....	.....	.....	10	181.8	9	116.0	15	197.8	15	194.0	2	26.4	.....	1	.....	12.9

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Organic heart disease.				Diarrhea and enteritis (under 2 years).			
	1918.		19		1919.			
	no.	Rate.	Deaths.	no.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS	1	102.1	1,496	49.5	440	25.0		
Allen, except	5	88.6	8	116.1	2	12.4	2	12.4
Iola	1	11.9	11	152.6	3	31.7	3	31.7
Anderson.	5	122.7	19	24.2	4	16.1	3	16.1
Atchison, except	6	51.2	3	123.9	2	17.1		
Atchison city.	8	118.2	19	19.5	3	39.2	4	39.2
Barber	5	83.6	2	60.0	1	9.8	1	9.8
Barton, except	2	93.4	6	151.8	3	59.8		
Great Bend	8	119.5	7	55.2	3	23.3	3	23.3
Bourbon, except	8	62.1	7	101.3	4	32.6	3	32.6
Fort Scott	9	81.2	13	79.8	7	33.5	2	20.2
Brown	3	95.0	17	19.4	5	54.1	7	46.7
Butler, except	3	72.4	5	92.5	3	78.9	4	57.8
Augusta	3	144.8	4	66.7	12	15.2	4	36.8
El Dorado	7	43.1	10	55.1	1	41.3	4	31.3
Chase	1	166.7	6	79.6	12	58.6	1	19.4
Chautauqua	8	55.6	6	91.5	3	20.3	1	6.6
Charlton, except	1	72.2	24	19.4	1	19.9	1	6.6
Galeus	5	97.7	4	59.1	2	13.2	6	44.5
Cherokee	3	60.8	1	74.2	4	29.7	1	22.3
Clark	1	19.9	1	155.6	3	18.1	4	26.7
Clay	5	83.8	9	59.4	2	13.7	1	19.8
Cloud, except.	3	59.8	10	112.2	3	30.7	2	18.7
Concordia	4	92.6	7	72.2	3	14.1		
Coffey	1	91.4	3	75.7	18	42.2	20	47.4
Comanche	3	56.2	3	55.8	3	16.7	5	27.9
Cowley, except	1	78.9	3	76.0	2	25.0		
Arkansas City.	3	81.7	12	100.5	3	30.7		
Winfield	7	9.1	6	45.0	5	48.2	5	19.4
Crawford, except	3	88.8	32	85.7	1	7.6	4	26.7
Pittsburg	0	55.6	10	32.3	3	48.7	1	8.5
Decatur	3	49.9	6	36	1	23.4	3	30.4
Dickinson	3	114.9	7	11	3	29.5	1	9.7
Douglas	1	60.2	10	75.9	10	72.3	5	25.8
Douglas, except.	2	94.6	11	67.7			1	10.0
Lawrence	1	163.5	5	70.6				
Edwards	1	58.4	7	10				
Elk	1	78.5	10	98.7				
Ellis	1	76.5	1	1				
Ellsworth	1	98.7	1	1				

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Cerebral hemorrhage and paralysis.				Organic heart disease.				Diarrhoea and enteritis (under 2 years).			
	1918.		1919.		1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Osborne	13	102.0	14	112.7	11	86.3	19	153.0	2	15.7	1	8.1
Ottawa	14	129.6	11	103.8	5	46.3	16	151.0	3	27.8	5	47.2
Pawnee	10	109.5	8	90.5	8	86.8	4	45.3	2	21.7	2	22.7
Phillips	7	36.7	8	65.0	10	79.5	4	33.0	1	8.0	1	6.5
Pottawatomie	15	98.2	18	116.7	20	130.9	10	64.9	4	26.2	1	8.3
Pratt	6	49.5	11	91.5	11	90.7	5	41.6	3	24.8	1	16.3
Rawlins	6	94.9	4	65.2	7	110.7	7	113.9	1	15.9	1	32.3
Reno, except	10	49.2	22	101.5	16	77.1	12	55.4	2	9.7	7	27.8
Hutchinson	33	141.1	27	107.0	26	111.2	15	59.5	12	51.3	7	18.9
Republic	6	36.6	14	83.2	17	103.7	4	25.2	12	14.4	3	20.7
Rice	15	107.9	14	96.5	12	86.3	11	75.9	2	10.5	1	10.5
Riley, except	5	51.5	3	31.4	3	30.9	7	73.3	1	10.5	1	10.5
Manhattan	12	150.8	10	137.0	15	188.5	6	82.8	1	12.6	1	10.0
Rooks	16	158.0	8	79.8	4	39.5	6	59.9	1	9.9	2	24.2
Rush	6	73.8	1	12.1	1	12.4	3	36.3	1	12.4	2	37.8
Russell	4	36.0	3	28.3	10	89.9	3	23.3	3	27.0	4	37.8
Saline, except	10	97.0	5	49.7	4	38.8	5	49.7	1	9.7	1	42.3
Salina	12	90.4	13	91.7	12	90.4	14	98.7	4	30.2	6	32.4
Scott	6	183.5	2	64.7	1	31.5	2	64.7	1	31.5	1	20.0
Sedgwick, except	13	67.7	21	104.6	16	83.3	13	64.8	3	15.7	4	48.3
Wichita	57	91.4	65	101.2	68	109.0	56	87.1	19	30.5	31	49.1
Seward	1	16.7	5	80.3	1	16.7	3	49.1	3	50.0	3	5.1
Shawnee, except	21	107.2	51	257.7	30	158.2	21	106.2	5	25.6	1	30.0
Topeka	50	107.0	67	143.4	90	192.6	73	156.2	21	45.0	14	37.7
Sheridan	3	56.7	8	155.2	5	94.4	2	33.3	1	13.9	2	33.0
Sherman	2	41.6	5	94.2	2	41.6	3	56.6	4	26.7	5	17.2
Smith	10	66.6	5	33.0	6	40.0	7	46.2	5	44.4	2	37.7
Stafford	11	97.6	11	94.2	3	26.7	5	42.9	2	60.1	2	51.9
Stanton	1	30.1	4	103.8	17	81.9	3	77.9	2	53.0	3	13.9
Stevens	17	81.9	17	78.7	8	145.4	20	92.6	11	52.9	1	15.9
Sumner, except	6	109.0	9	142.7	4	79.9	6	95.2	3	40.0	2	39.4
Wellington	1	19.0	2	39.4	2	32.6	1	19.7	2	43.4	1	16.7
Thomas	3	48.0	6	99.9	13	112.8	13	112.5	5	43.4	1	8.6
Trego	9	78.1	10	86.6	2	90.2	1	46.2	1	45.1	1	11.4
Wabaunsee	1	45.1	22	125.0	17	99.4	9	51.2	6	32.3	2	14.7
Wallace	2	118.3	2	109.6	2	109.6	3	165.1	1	53.4	3	10.5
Washington	2	72.9	17	83.1	17	82.6	14	63.4	11	53.4	1	2
Wichita	15	152.8	14	147.6	10	108.8	6	63.3	6	52.4	51	52.9
Wilson	14	83.8	14	130.5	29	303.8	21	195.8	5	61.3	1	13.0
Woodson	8	106.4	76	78.8	115	123.5	87	90.2	57	52.8	1	13.0
Wyandotte, except	99	66.0	4	51.7	15	97.8	11	142.2	4	52.8	1	13.0
Kansas City	5	66.0	4	51.7	15	97.8	11	142.2	4	52.8	1	13.0
Rosedale	5	66.0	4	51.7	15	97.8	11	142.2	4	52.8	1	13.0

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Diseases of the liver.				Bright's disease.				Malformations and early infancy.				Suicides.			
	1918.		1919.		1918.		1919.		1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS.....	311	17.9	322	18.3	1,304	75.2	1,168	66.4	1,568	90.4	1,317	74.8	215	12.4	213	12.1
Allen, except Iola.....	5	29.5	4	24.8	11	64.9	8	49.5	16	94.4	12	74.2	1	10.8	1	6.2
Anderson.....	3	24.6	5	42.2	6	64.6	1	10.6	8	86.2	5	52.8	1	16.4	1	10.6
Atchison, except Atchison city.....	2	17.1	2	16.1	11	90.0	9	72.8	8	65.5	6	48.2	2	8.6	.....	.....
Barber.....	4	26.3	.....	.....	10	86.0	9	72.4	5	42.7	9	72.4	1	13.2	4	26.1
Barton, except Great Bend.....	1	10.5	.....	.....	20	181.3	8	52.2	14	91.9	8	52.2	2	20.9	.....	.....
Bourbon, except Fort Scott.....	8	23.4	.....	.....	3	81.4	5	48.7	10	105.0	11	107.1	2	7.8	1	7.5
Brown.....	1	19.0	2	43.4	10	78.0	5	37.5	14	109.0	9	67.5	1	.....	1	21.7
Butler, except Augusta.....	1	7.6	4	31.6	7	139.0	4	86.8	2	40.0	9	195.2	.....	.....	1	7.9
El Dorado.....	1	6.2	2	15.6	8	62.1	8	63.1	7	54.3	3	63.1	.....	.....	1	23.4
Chase.....	2	18.5	.....	.....	13	106.0	7	54.6	14	114.0	9	70.1	2	16.3	3	4.7
Chautauqua.....	11	37.8	10	33.2	12	57.4	7	32.9	11	53.0	19	89.2	1	4.8	1	33.8
Cherokee, except Galena.....	2	39.1	2	40.7	7	28.2	4	15.5	18	72.4	15	53.1	3	12.1	1	46.2
Cheyenne.....	2	40.5	1	18.5	2	36.1	2	46.2	8	144.0	11	253.9	1	18.1	2	.....
Clark.....	.....	.....	1	6.6	7	43.1	2	13.0	19	117.0	12	78.3	4	24.6	.....	.....
Clay.....	3	19.8	7	45.9	6	90.4	2	28.9	6	75.3	4	57.3	.....	.....	1	14.5
Cloud, except Concordia.....	4	29.7	4	29.7	10	93.0	7	64.3	4	37.1	7	64.3	.....	.....	.....	.....
Coffey.....	2	46.3	1	22.3	26	89.4	30	99.4	26	89.4	30	99.4	8	27.5	6	19.9
Comanche.....	2	13.1	1	6.7	12	234.4	11	223.4	4	78.1	4	81.3	1	19.6	1	20.4
Cowley, except Arkansas City.....	.....	.....	1	18.5	1	20.3	3	55.4	5	101.3	5	92.3	.....	.....	.....	.....
Crawford, except Pittsburg.....	3	19.8	7	45.9	1	19.9	4	73.9	6	113.9	4	73.9	.....	.....	.....	.....
Decatur.....	4	29.7	4	29.7	8	52.7	10	65.7	10	65.9	14	91.9	1	6.5	1	7.4
Dickinson.....	5	51.0	2	18.4	18	96.4	2	14.9	15	111.2	5	37.1	.....	.....	.....	.....
Doniphan.....	5	68.7	5	60.1	5	115.7	6	183.4	6	118.9	5	111.2	.....	.....	.....	.....
Douglas, except Lawrence.....	11	25.7	12	28.4	5	32.7	8	53.3	10	65.3	10	66.6	.....	.....	.....	.....
Edwards.....	1	5.5	3	16.8	1	18.7	1	19.8	3	56.1	3	59.4	.....	.....	.....	.....
Ellis.....	4	15.3	1	12.5	9	64.5	11	67.4	9	64.5	10	61.2	.....	.....	.....	.....
Ellsworth.....	7	42.1	4	15.5	18	184.0	11	102.3	16	164.0	11	102.3	.....	.....	.....	.....
Finney.....	2	17.2	2	17.2	38	88.8	34	80.4	50	117.0	23	54.4	.....	.....	.....	.....
.....	.....	.....	3	12.5	22	122.2	9	50.2	19	105.3	8	44.7	.....	.....	.....	.....
.....	.....	.....	1	12.5	3	37.4	1	12.5	7	87.3	6	74.9	.....	.....	.....	.....
.....	.....	.....	4	15.5	22	84.3	18	69.6	25	95.8	24	92.8	.....	.....	.....	.....
.....	.....	.....	2	12.9	11	66.3	8	51.4	8	48.2	12	77.1	.....	.....	.....	.....
.....	.....	.....	4	17.2	8	25.8	5	42.9	5	42.9	4	34.3	.....	.....	.....	.....
.....	.....	.....	4	29.9	7	52.0	8	59.8	8	59.5	3	22.4	.....	.....	.....	.....
.....	.....	.....	2	30.4	1	14.6	8	45.5	4	58.3	6	90.9	.....	.....	.....	.....
.....	.....	.....	3	29.1	9	88.3	3	29.1	12	117.7	7	67.7	.....	.....	.....	.....
.....	.....	.....	6	42.3	4	28.9	1	7.1	18	130.1	21	148.2	.....	.....	.....	.....
.....	.....	.....	3	29.8	7	69.1	3	29.8	14	138.1	10	99.2	.....	.....	.....	.....
.....	.....	.....	3	36.6	1	13.5	1	12.2	8	107.7	7	85.4	.....	.....	.....	.....

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Diseases of the liver.				Bright's disease.				Malformations and early infancy.				Suicides.			
	1918.		1919.		1918.		1919.		1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Ford, <i>except</i>.....	.....	.....	1	10.9	6	63.1	10	109.5	9	94.6	8	87.6	1	10.6	.....	.....
Dodge City.....	3	62.5	.....	.....	1	20.9	1	21.6	3	62.5	10	215.2	.....	.....	.....	.....
Franklin, <i>except</i>	3	21.8	2	14.5	12	86.9	7	50.7	11	79.7	1	7.3	.....	.....	.....	.....
Ottawa.....	3	31.7	3	31.5	8	84.4	5	52.5	14	120.2	12	125.9	3	31.7	3	31.5
Geary, <i>except</i>	3	69.9	.....	.....	6	139.9	6	96.3	8	69.9	3	48.2	5	116.7	2	32.1
Junction City.....	1	11.8	1	14.1	5	53.7	4	56.2	13	152.9	8	112.4	2	23.6	.....	.....
Gove.....	.....	.....	2	27.9	5	107.7	3	60.4	3	64.6	3	60.4	3	64.6	.....	.....
Graham.....	.....	.....	.....	.....	3	41.7	7	97.8	10	139.0	4	55.9	2	27.8	.....	.....
Grant.....	.....	.....	.....	.....	1	91.5	.....	.....	1	91.5	.....	.....	.....	.....	.....	.....
Gray.....	.....	.....	.....	.....	4	94.9	4	94.9	7	61.3	2	47.5	.....	.....	.....	.....
Greeley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenwood.....	3	19.9	.....	.....	7	46.5	7	46.7	9	59.0	12	79.9	2	13.3	.....	.....
Hamilton.....	.....	.....	.....	.....	.....	.....	2	80.7	2	78.8	2	80.7	.....	.....	2	80.7
Harper.....	3	23.7	3	22.1	7	55.2	7	51.5	11	86.7	13	95.6	1	7.8	1	7.4
Harvey, <i>except</i>	4	37.8	4	36.9	7	66.2	7	64.8	3	28.4	10	92.5	.....	.....	1	9.2
Newton.....	3	36.7	4	48.5	11	134.5	17	205.9	11	134.5	12	145.4	.....	.....	5	60.6
Haskell.....	.....	.....	.....	.....	1	53.1	.....	.....	3	174.5	1	65.7	.....	.....	.....	.....
Hodgeman.....	.....	.....	1	27.9	1	26.8	1	27.9	4	107.0	4	111.8	1	26.8	1	27.9
Jackman.....	2	13.7	3	19.9	6	40.9	8	53.3	9	61.3	9	59.9	3	20.5	1	6.7
Jefferson.....	1	6.6	1	6.7	12	79.7	6	39.9	9	59.8	8	53.2	2	13.3	1	6.7
Jewell.....	3	18.8	3	18.7	4	25.1	7	43.8	8	50.2	6	37.5	.....	.....	5	31.3
Johnson.....	2	11.7	.....	.....	13	75.8	8	46.3	13	75.8	5	28.9	1	5.8	8	17.4
Kearny.....	.....	.....	.....	.....	1	38.6	.....	.....	2	77.2	1	38.6	.....	.....	.....	.....
Kingman.....	.....	.....	2	17.2	5	44.3	3	25.8	3	70.3	6	51.6	.....	.....	.....	.....
Kiowa.....	.....	.....	1	16.3	4	63.7	3	48.6	7	111.5	5	80.9	.....	.....	.....	.....
Labette, <i>except</i>	4	22.3	2	11.4	13	72.5	12	68.2	16	89.2	10	56.8	2	11.2	6	34.1
Parsons.....	1	5.7	4	24.4	13	75.3	11	66.9	19	109.9	13	79.2	1	5.7	3	18.3
Lane.....	.....	.....	1	40.9	.....	.....	1	40.9	1	40.2	3	122.8	.....	.....	.....	.....
Leavenworth, <i>except</i>	6	31.1	3	15.3	67	348.0	67	341.5	14	72.7	10	50.9	6	31.1	8	40.8
Leavenworth city.....	8	36.6	4	18.2	24	109.0	17	77.3	29	132.8	26	118.2	3	18.7	1	4.6
Lincoln.....	1	9.9	1	9.9	3	29.9	4	39.9	7	69.8	9	89.8	2	19.9	1	9.9
Linn.....	.....	.....	2	12.9	6	39.8	12	77.9	8	51.3	10	64.9	1	6.7	4	25.9
Logan.....	.....	.....	.....	.....	1	28.5	.....	.....	4	114.0	2	61.2	1	28.5	2	61.2
Lyon, <i>except</i>.....	.....	.....	2	18.7	12	79.5	9	61.4	10	66.2	8	54.6	1	6.6	1	6.9
Emporia.....	3	27.7	1	9.1	13	119.9	11	99.3	6	56.4	5	45.4	1	9.3	2	18.2
Marion.....	.....	.....	3	13.7	10	46.5	21	95.5	20	92.9	13	59.1	.....	.....	3	18.7
Marshall.....	8	13.8	3	13.5	18	59.5	13	58.5	20	91.4	10	44.9	4	18.3	3	13.5
McPherson.....	3	13.8	5	21.8	7	32.2	11	47.9	21	96.5	13	56.6	2	9.2	.....	.....
Meade.....	.....	.....	.....	.....	3	52.8	1	13.1	6	104.6	11	198.5	1	17.5	.....	.....
Miami.....	1	5.4	4	21.3	19	102.2	16	85.2	14	75.4	11	58.6	7	37.7	2	10.7
Mitchell.....	1	7.2	1	7.6	5	36.1	6	45.3	11	79.4	14	105.6	1	7.2	1	7.6

Montgomery, except	7	51.9	4	17.2	9	38.9	13	55.8	20	86.7	21	90.1	3	13.0	3	12.9
Coffeyville	2	17.4	1	6.8	9	66.9	12	74.8	12	89.2	8	49.9	3	7.5	3	18.7
Independence	2	16.2	2	16.2	4	34.8	9	72.9	14	121.7	17	137.7	1	8.7	1	8.3
Morris	2	16.5	4	33.2	7	57.6	9	74.7	7	57.6	14	116.2	1	8.3	1	8.3
Morton	4	21.8	2	10.4	2	79.5	1	42.7	6	238.4	11	56.8	2	10.9	3	15.5
Nemaha	1	7.5	2	15.4	6	32.6	7	36.2	17	92.4	7	53.9	1	7.5	2	15.4
Neosho, except	2	19.3	1	9.5	6	44.7	6	38.5	15	111.6	13	123.4	2	19.3	2	18.9
Chanute	1	8.8	2	28.6	2	67.4	6	56.9	17	163.5	5	71.4	1	8.8	1	8.1
Ness	3	14.7	2	18.3	17	149.2	8	42.9	10	87.8	5	45.7	3	14.7	3	15.0
Norton	3	23.6	1	5.0	19	92.5	15	74.9	16	77.9	10	49.9	2	15.7	1	8.1
Osage	3	18.6	2	16.1	3	28.6	6	48.3	9	70.6	7	56.4	2	15.7	2	8.1
Osborne	2	43.4	2	22.5	4	37.1	3	28.3	6	55.6	9	85.0	3	15.9	3	33.9
Ottawa	4	39.8	5	13.0	7	75.9	6	67.8	13	141.1	12	135.6	2	15.9	2	6.5
Pawnee	5	26.2	2	13.0	5	39.8	4	33.0	9	71.6	4	33.0	1	6.6	1	8.3
Phillips	4	14.9	2	13.0	8	52.4	3	51.9	10	66.0	5	32.4	4	32.9	2	32.6
Pottawatomie	2	31.7	2	23.1	1	8.3	2	16.6	13	107.2	8	66.5	1	15.9	2	9.2
Pratt	2	19.8	5	35.7	2	38.6	3	48.8	5	79.1	6	81.8	2	9.7	2	7.9
Rawlins	4	8.6	9	12.6	18	76.9	11	50.7	23	110.8	24	110.6	1	4.3	3	34.7
Reno, except	3	18.3	2	13.9	9	64.7	4	27.4	5	30.5	10	63.0	3	18.3	5	21.0
Hutchinson	4	28.8	2	41.9	9	54.9	6	62.8	18	129.4	11	77.1	2	12.5	2	27.6
Republic	1	10.3	4	27.6	2	20.6	4	55.2	12	123.5	6	62.8	1	12.5	2	27.6
Rice	4	50.3	2	27.6	10	125.7	4	55.2	12	150.8	3	41.4	2	12.5	2	27.6
Riley, except	1	9.9	4	27.6	4	39.5	5	49.8	6	59.3	6	59.9	2	12.5	2	20.0
Manhattan	1	26.9	1	9.5	1	12.3	3	36.3	9	110.6	5	60.4	2	8.9	2	18.9
Rooks	3	9.7	1	10.0	7	62.9	5	47.2	9	80.9	6	56.6	1	9.7	1	7.0
Rush	1	87.7	11	77.6	7	67.9	1	10.0	10	96.9	6	59.6	1	7.6	1	7.0
Russell	1	81.5	1	32.4	8	60.3	16	112.8	18	135.6	10	70.5	1	7.6	1	7.0
Saline, except	2	10.5	18	27.9	13	67.7	3	14.9	22	114.5	10	32.4	1	5.3	3	14.9
Salina	16	25.7	2	32.1	60	96.2	57	88.7	63	108.9	62	96.5	8	12.9	9	13.9
Scott	1	5.2	11	23.6	17	86.8	10	160.2	7	116.6	7	112.2	4	35.8	4	20.2
Sedgwick, except	8	17.2	11	23.6	61	130.6	29	146.5	15	76.6	12	60.4	11	14.9	11	23.6
Seward	1	17.2	11	23.6	61	130.6	53	113.4	53	113.4	34	72.8	1	19.0	1	19.5
Shawnee, except	2	18.4	1	6.6	3	56.7	1	19.5	3	56.7	4	77.6	1	20.8	1	18.9
Topeka	2	17.8	1	6.6	10	66.6	4	75.3	3	62.3	8	56.6	3	19.9	1	6.6
Sheridan	2	17.8	1	6.6	13	115.4	11	72.5	6	39.9	13	85.7	1	8.9	1	8.6
Sherman	2	17.8	1	6.6	13	115.4	9	77.1	14	124.3	13	111.3	1	8.9	1	8.6
Smith	2	17.8	1	6.6	13	115.4	9	77.1	14	124.3	13	111.3	1	8.9	1	8.6
Stafford	2	17.8	1	6.6	13	115.4	9	77.1	14	124.3	13	111.3	1	8.9	1	8.6
Stanton	2	17.8	1	6.6	13	115.4	9	77.1	14	124.3	13	111.3	1	8.9	1	8.6
Stevens	2	17.8	1	6.6	13	115.4	9	77.1	14	124.3	13	111.3	1	8.9	1	8.6
Sumner, except	1	4.9	2	9.8	1	30.1	1	25.0	2	60.1	12	31.2	1	30.1	1	26.0
Wellington	1	19.9	1	15.9	11	52.9	11	51.0	18	86.7	10	46.7	3	14.5	3	18.9
Thomas	1	19.9	1	15.9	4	72.7	4	64.1	5	90.8	7	111.0	2	36.4	2	16.7
Trego	1	19.9	1	15.9	1	19.9	1	19.7	2	39.9	5	98.3	1	32.6	1	16.7
Wabaunsee	3	26.1	1	16.7	6	97.6	1	16.7	3	48.8	6	99.9	2	17.4	1	8.7
Wallace	3	26.1	1	16.7	6	97.6	1	16.7	3	48.8	6	99.9	2	17.4	1	8.7
Washington	4	21.5	6	34.1	1	45.1	2	26.0	17	147.5	5	43.3	2	17.4	1	8.7
Wichita	4	21.5	6	34.1	1	45.1	2	26.0	3	135.2	4	184.6	2	10.8	2	10.8
Wilson	2	9.8	4	19.6	13	63.2	11	78.9	8	42.9	5	28.4	2	10.8	2	10.8
Woodson	1	10.9	1	10.6	13	63.2	11	78.9	3	164.3	1	56.0	3	14.6	1	4.9
Wyandotte, except	1	10.5	2	18.7	11	119.7	7	78.8	21	101.9	16	78.2	1	10.9	1	10.6
Kansas City	18	19.4	24	24.9	113	125.7	10	93.3	9	97.9	6	63.3	1	10.5	1	10.6
Rosedale	4	52.8	4	51.7	7	92.3	2	25.9	14	184.6	88	91.3	17	18.3	16	16.6

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Accidents.				Homicides.			
	1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS.....	1,181	65.2	1,125	63.9	94	5.4	120	6.8
Allen, <i>except</i>	8	47.2	9	55.6			1	6.2
Iola.....	7	75.4	7	73.8				
Anderson.....	7	57.3	8	64.2			1	8.0
Atchison, <i>except</i>	3	25.6	7	56.3				
Atchison city.....	9	59.1	13	84.8			8	19.6
Barber.....	8	83.6	6	58.4				
Barton, <i>except</i>	8	62.3	15	112.3			1	7.5
Great Bend.....	2	39.9	7	151.8				
Bourbon, <i>except</i>	10	77.6	6	47.8			3	23.8
Fort Scott.....	16	129.9	13	101.3			1	7.8
Brown.....	13	62.2	5	23.4				
Butler, <i>except</i>	5	20.2	15	58.1				
Augusta.....	9	162.0	5	115.4				
El Dorado.....	18	118.1	9	58.7	2	13.2	2	13.1
Chase.....	4	60.3	3	48.4				
Chautauqua.....	7	64.9	2	18.4				
Cherokee, <i>except</i>	23	79.1	32	100.1	1	8.5	2	6.3
Galena.....	3	58.6	4	81.2	1	19.6		
Cheyenne.....	6	121.5	2	36.9				
Clark.....	1	19.9	5	96.8				
Clay.....	8	52.7	6	39.4				
Cloud, <i>except</i>	6	44.5	7	51.8				
Concordia.....	9	208.5	8	177.8				
Coffey.....	11	71.8	4	26.6				
Comanche.....	2	37.4	4	79.2				
Cowley, <i>except</i>	12	86.1	4	24.5				
Arkansas City.....	7	71.4	9	84.1			1	9.3
Winfield.....	6	82.4	12	144.2				
Crawford, <i>except</i>	56	130.8	52	122.8	6	14.1	8	18.9
Pittsburg.....	11	60.0	6	33.4	1	5.6	1	5.6
Decatur.....	5	62.4	1	12.5				
Dickinson.....	9	34.5	18	69.5			8	11.6
Doniphan.....	10	60.2	4	25.7				
Douglas, <i>except</i>	5	43.0	7	59.9				
Lawrence.....	9	66.9	4	29.9				
Edwards.....	7	101.0	3	45.5	1	14.6		
Elk.....	1	9.9	4	38.7			1	9.7
Ellis.....	8	57.8	18	127.0	1	7.3		
Ellsworth.....	3	29.6	6	59.5				
Finney.....	5	67.3	3	36.6				
Ford, <i>except</i>	6	63.1	8	87.4				
Dodge City.....	7	145.0	2	43.3	1	20.9	1	21.6
Franklin, <i>except</i>	6	43.5	9	65.2				
Ottawa.....	4	42.2	4	42.0			1	10.5
Geary, <i>except</i>	12	280.0	4	64.2	7	163.5	2	82.2
Junction City.....	10	117.6	6	84.8				
Gove.....	1	21.6	4	80.5				
Graham.....	7	97.3	3	41.9				
Grant.....	2	132.9			1	91.5		
Gray.....	5	108.9	2	47.5				
Greeley.....			1	83.6				
Greenwood.....	8	53.2	8	53.2				
Hamilton.....			5	201.5				
Harper.....	5	39.4	7	51.4				
Harvey, <i>except</i>	5	47.3	8	74.0				
Newton.....	8	97.8	13	157.6	1	12.3		
Haskell.....			2	131.2				
Hodgeman.....	1	26.8	1	27.9				
Jackson.....	4	27.3	10	66.6				
Jefferson.....	5	33.2	5	33.2			1	6.6
Jewell.....	3	18.8	3	18.7				
Johnson.....	10	58.4	17	98.2			2	11.6
Kearny.....	4	154.3	4	154.0				
Kingman.....	8	70.8	9	77.4				
Kiowa.....	3	47.8	2	32.8				
Labette, <i>except</i>	11	61.3	16	37.5			2	11.4
Parsons.....	13	75.3	15	91.2	2	19.6	1	6.1

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1918 and 1919.

COUNTIES AND CITIES.	Accidents.				Homicides.			
	1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Lane.....	1	40.2						
Leavenworth, <i>except</i> ..	16	82.0	24	122.2	3	15.6	6	31.1
Leavenworth city..	9	41.2	18	59.1	1	4.6	2	9.1
Lincoln.....	1	10.0	5	49.9			1	10.0
Linn.....	5	33.2	13	84.4			2	13.0
Logan.....	1	28.5	1	30.6				
Lyon, <i>except</i>	8	52.9	7	47.7				
Emporia.....	11	101.5	8	72.5			2	18.1
Marion.....	13	60.4	16	72.7	1	4.6		
Marshall.....	11	50.3	9	40.4				
McPherson.....	12	55.1	8	34.8	1	4.6	1	4.4
Meade.....	4	69.6	3	54.2				
Miami.....	12	64.6	18	95.8	3	16.1	4	29.3
Mitchell.....	17	122.5	4	30.1				
Montgomery, <i>except</i> ..	22	95.4	11	47.2	1	43.3	1	4.3
Coffeyville.....	16	118.7	13	81.0	2	14.8	1	6.2
Independence.....	10	86.9	9	72.8	1	8.7		
Morris.....	9	74.0	11	91.3				
Morton.....	1	39.8	4	172.2				
Nemaha.....	10	54.3	12	62.0			1	5.2
Neosho, <i>except</i>	7	52.1	7	53.8			1	7.7
Chanute.....	10	96.1	10	95.0	1	9.6	1	9.5
Ness.....	3	42.9	3	42.8				
Norton.....	7	61.4	9	82.2				
Osage.....	9	35.9	5	25.0	2	8.0		
Osborne.....	9	70.5	2	16.1				
Ottawa.....	3	27.8	5	47.4				
Pawnee.....	6	65.1	3	33.9				
Phillips.....	4	31.8	5	41.2				
Pottawatomie.....	8	52.4	12	77.8			1	6.5
Pratt.....	9	74.2	4	33.3				
Rawlins.....	2	31.6	3	48.8			1	16.2
Reno, <i>except</i>	8	29.2	12	55.8	3	10.9		
Hutchinson.....	10	42.7	18	71.3			3	11.9
Republic.....	5	30.4	7	44.2			1	6.3
Rice.....	16	115.0	7	48.2			2	13.8
Riley, <i>except</i>	5	51.4	3	31.4	1	10.3		
Manhattan.....	8	107.2	1	13.8	1	13.4	1	13.8
Rooks.....	6	59.2	2	19.9				
Rush.....	2	24.6	3	36.3	1	12.3		
Russell.....	2	18.0	3	28.3				
Saline, <i>except</i>	5	48.4	7	69.5				
Salina.....	11	82.8	12	84.7	1	7.5		
Scott.....	3	94.2	2	64.6				
Sedgwick, <i>except</i>	7	36.4	8	39.9	2	10.4		
Wichita.....	45	72.1	53	82.1	9	14.4	8	12.4
Seward.....	5	83.2	4	64.1	1	16.6		
Shawnee, <i>except</i>	14	71.5	18	65.7	1	5.1		
Topeka.....	24	51.3	33	70.6	4	85.6	8	17.1
Sheridan.....	1	18.9	3	58.2	1	18.9		
Sherman.....			1	18.8				
Smith.....	7	46.6	1	6.6			1	6.6
Stafford.....	7	62.1	2	17.1			1	8.6
Stanton.....			1	96.4				
Stevens.....			3	77.8				
Sumner, <i>except</i>	12	57.8	6	27.8				
Wellington.....	11	200.5	6	95.1	2	36.7		
Thomas.....	1	20.0	3	59.1	1	20.0		
Trego.....	4	65.1	6	99.5				
Wabaunsee.....	7	60.7	5	43.5			1	8.6
Wallace.....	4	181.0						
Washington.....	6	32.2	4	22.7	1	5.4		
Wichita.....			1	55.0				
Wilson.....	11	53.4	9	36.4				
Woodson.....	6	65.3	5	52.7	1	10.9		
Wyandotte, <i>except</i>	6	62.9	7	65.2	1	10.5		
Kansas City.....	90	96.6	92	95.3	21	22.5	31	32.2
Rosedale.....	11	145.0	4	51.7	1	13.2		

TABLE No. 5. Showing number of deaths and death rate per 100,000 population for influenza and pneumonia, by counties, 1918 and 1919.

COUNTIES AND CITIES.	Influenza.				Pneumonia (all forms).			
	1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS.....	2,639	152.1	1,315	74.7	6,049	348.9	2,299	130.6
Allen, except.....	28	165.1	8	49.4	36	212.4	21	129.7
Iola.....	6	64.6	8	81.7	44	473.6	14	147.8
Anderson.....	8	65.4	9	72.2	36	212.6	14	112.4
Atchison, except.....	16	136.4	5	40.8	16	136.6	5	40.3
Atchison city.....	21	187.8	8	52.1	28	188.8	16	104.4
Barber.....	9	94.0	3	29.2	31	323.6	9	87.8
Barton, except.....	32	259.2	13	97.5	24	186.9	18	97.4
Great Bend.....	6	119.4	8	173.5	12	239.0	5	108.4
Bourbon, except.....	10	77.5	5	39.4	34	263.7	12	94.6
Fort Scott.....	8	64.9	3	23.7	41	382.7	9	70.1
Brown.....	20	95.5	14	65.7	45	215.0	23	107.9
Butler, except.....	16	64.4	15	58.1	36	144.8	18	69.8
Augusta.....	5	90.1	5	115.4	30	540.6	10	230.8
El Dorado.....	22	135.5	8	52.2	57	350.9	25	163.2
Chase.....	3	45.2	.....	.....	20	302.8	9	130.1
Chautauqua.....	9	83.3	7	64.3	22	203.8	21	192.8
Cherokee, except.....	67	229.8	29	96.1	100	343.6	43	142.5
Galena.....	10	195.3	11	223.2	18	351.6	7	142.3
Cheyenne.....	3	60.7	5	92.4	5	101.4	4	78.9
Clark.....	4	79.9	1	193.3	4	79.4	14	270.6
Clay.....	21	138.2	20	131.2	37	243.5	9	59.1
Cloud, except.....	16	118.6	4	29.7	25	185.3	14	103.8
Concordia.....	6	138.8	1	22.2	19	439.8	4	89.0
Coffey.....	12	78.2	12	79.9	14	91.4	18	119.8
Comanche.....	5	93.4	5	99.8	13	242.9	11	217.7
Cowley, except.....	42	301.0	9	55.0	49	351.2	18	110.2
Arkansas City.....	11	112.1	10	93.4	46	469.4	21	196.8
Winfield.....	9	123.6	4	48.1	47	645.1	8	96.2
Crawford, except.....	93	217.1	29	68.5	174	406.4	66	156.0
Pittsburg.....	28	155.2	21	117.2	72	309.0	39	217.7
Decatur.....	1	124.6	3	37.5	8	99.8	8	100.0
Dickinson.....	31	118.7	27	104.4	55	210.7	26	100.5
Doniphan.....	21	126.4	22	86.1	25	150.5	17	109.2
Douglas, except.....	35	300.9	.....	.....	24	206.4	10	85.7
Lawrence.....	23	170.9	4	29.9	40	297.3	8	59.3
Edwards.....	3	43.7	3	45.5	15	218.6	7	106.2
Elk.....	5	49.0	10	96.6	18	176.5	10	96.3
Ellis.....	36	260.0	12	84.7	56	405.0	23	162.3
Ellsworth.....	6	59.3	7	69.4	28	276.2	10	99.2
Finney.....	17	228.8	6	73.3	44	592.0	14	170.8
Ford, except.....	4	42.1	5	54.7	24	252.4	11	120.4
Dodge City.....	13	271.0	1	21.6	19	396.0	6	29.1
Franklin, except.....	17	123.0	2	14.5	30	217.3	8	57.9
Ottawa.....	5	52.7	3	31.5	34	353.4	19	199.4
Geary, except.....	201	.....	5	.....	927	.....	41	.....
Junction City.....	29	340.9	9	126.4	49	576.1	8	112.4
Gove.....	2	43.0	4	80.4	4	86.2	5	100.6
Graham.....	14	194.4	10	139.7	6	93.4	4	55.9
Grant.....	.....	.....	3	273.8	.....	.....	.....	.....
Gray.....	2	43.6	5	118.7	12	261.5	4	95.0
Greeley.....	.....	.....	.....	.....	2	175.0	2	167.3
Greenwood.....	14	93.1	13	86.5	41	272.6	16	106.6
Hamilton.....	2	79.4	6	241.8	10	393.8	7	282.3
Harper.....	8	63.0	9	66.1	26	204.8	19	139.7
Harvey, except.....	12	113.4	8	74.0	18	170.1	12	111.0
Newton.....	23	281.2	12	145.3	44	537.8	15	187.8
Haskell.....	.....	.....	6	393.6	1	58.2	2	131.3
Hodgeman.....	3	80.3	4	111.8	5	133.8	1	28.0
Jackson.....	17	115.8	12	80.0	33	225.0	24	159.9
Jefferson.....	23	185.8	23	152.8	31	205.9	16	106.4
Jewell.....	20	125.2	12	74.9	23	175.5	19	118.7
Johnson.....	19	111.0	7	40.4	44	256.9	22	127.2
Kearny.....	2	77.2	.....	.....	4	154.3	2	79.2
Kingman.....	14	123.7	13	111.7	25	221.3	17	146.2
Kiowa.....	3	47.7	5	48.6	7	111.5	6	97.3
Labette, except.....	26	144.9	17	96.6	60	334.4	33	187.4
Parsons.....	23	133.2	15	91.2	66	381.9	33	200.7

TABLE No. 5—CONCLUDED. Deaths and rates, influenza and pneumonia, 1918 and 1919.

COUNTIES AND CITIES.	Influenza.				Pneumonia (all forms).			
	1918.		1919.		1918.		1919.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Lane.....			1	41.0	1	40.5	3	122.8
Leavenworth, except.....	70		10	50.9	146		43	219.2
Leavenworth city.....	80	187.2	12	54.5	81	370.8	15	68.2
Lincoln.....	6	59.9	3	29.9	10	99.8	14	139.7
Linn.....	16	106.1	10	64.9	29	192.3	17	110.4
Logan.....	2	57.0	1	30.6	4	113.7	1	30.6
Lyon, except.....	7	46.3	6	40.9	38	351.6	10	68.3
Emporia.....	10	92.3	2	18.1	62	573.7	5	45.4
Marion.....	27	125.4	34	154.4	49	227.8	26	118.2
Marshall.....	21	96.1	12	54.0	44	201.1	35	157.5
McPherson.....	26	119.5	12	52.3	41	188.8	22	95.8
Meade.....	1	17.4	2	36.1	5	87.2	2	36.2
Miami.....	48	258.2	8	42.6	87	468.0	36	191.7
Mitchell.....	15	108.2	8	60.3	27	194.8	16	120.7
Montgomery, except.....	59	255.8	25	107.2	67	290.3	25	107.2
Coffeyville.....	21	155.8	13	81.1	35	260.0	27	168.2
Independence.....	30	260.5	13	105.1	46	399.9	11	89.1
Morris.....	17	139.7	12	99.7	27	222.0	13	107.9
Morton.....	3	119.6			21	334.4	8	341.5
Nemaha.....	14	76.0	4	20.7	46	249.9	23	118.7
Neosho, except.....	14	104.2	12	92.4	22	163.7	14	107.7
Chanute.....	18	124.9	8	75.9	71	632.7	8	76.0
Ness.....	2	28.6	4	57.1	14	200.2	4	57.1
Norton.....	8	70.2	2	18.3	11	96.6	8	73.1
Osage.....	14	68.1	16	79.9	40	194.8	21	104.9
Osborne.....	13	101.8	10	80.4	28	219.6	6	43.3
Ottawa.....	8	74.0	9	84.9	20	185.1	9	84.0
Pawnee.....	5	54.3	1	13.0	19	206.2	8	90.5
Phillips.....	7	55.6	8	66.0	15	119.3	14	115.4
Pottawatomie.....	16	104.7	14	90.8	31	202.9	17	110.2
Pratt.....	20	164.9	13	108.1	19	156.6	10	83.2
Rawlins.....	2	31.6	2	32.6	24	221.5	10	162.7
Reno, except.....	21	101.1	23	106.1	40	192.6	42	193.6
Hutchinson.....	59	252.0	21	82.9	87	371.8	40	158.5
Republic.....	20	121.7	7	44.0	36	219.5	22	133.6
Rice.....	18	128.5	17	117.2	37	266.0	12	82.3
Riley, except.....	14	144.2	2	20.9	17	174.9	8	83.7
Manhattan.....	18	226.1	8	110.4	37	464.9	11	152.1
Rooks.....	3	29.6	13	130.0	8	79.0	4	39.9
Rush.....	21	258.0	2	24.2	10	122.9	5	60.4
Russell.....	12	107.8	8	75.3	15	134.8	16	150.9
Saline, except.....	13	126.0	9	39.4	21	203.7	9	89.4
Salina.....	31	233.5	3	21.1	53	436.9	19	133.9
Scott.....	2	62.8			3	94.3		
Sedgwick, except.....	16	83.3	13	64.8	29	150.9	13	89.7
Wichita.....	96	153.7	75	116.2	294	471.2	121	188.2
Seward.....	5	33.3	3	48.1	32	532.9	9	144.3
Shawnee, except.....	12	61.3	13	91.1	45	229.7	43	217.3
Topeka.....	57	121.8	27	57.3	231	494.3	83	177.6
Sheridan.....	1	18.9	1	19.4	4	75.6	9	174.6
Sherman.....	12	243.9	3	56.5	13	269.7	5	94.2
Smith.....	9	59.8	12	79.0	29	193.1	17	112.0
Stafford.....	11	97.6	7	59.9	26	230.7	11	94.2
Stanton.....			1	96.5	1	98.5	1	96.4
Stevens.....	4	120.1	3	77.9	10	300.3		
Sumner, except.....	29	139.7	12	55.5	33	182.0	24	111.2
Wellington.....	15	272.5	3	47.6	21	331.5	13	206.2
Thomas.....	1	20.0	4	78.7	7	130.0	10	196.6
Trego.....	11	178.9	6	99.9	9	146.4	2	33.3
Wabaunsee.....	4	34.7	5	43.3	24	208.2	13	112.5
Wallace.....	3	135.2	9	415.4	6	270.4	4	184.6
Washington.....	21	112.7	14	79.6	37	198.9	11	62.5
Wichita.....	1	54.8	3	165.1	1	54.8	1	55.0
Wilson.....	27	131.1	10	48.9	55	267.0	29	141.7
Woodson.....	4	43.5	3	31.7	16	173.0	10	105.4
Wyandotte.....	13	136.2	5	46.7	33	398.1	12	111.9
Kansas City.....	263	281.9	92	95.4	503	540.2	179	135.6
Rosedale.....	22	290.0	8	103.3	53	698.9	20	258.4

TABLE No. 6. Showing population, births and birth rates per 1,000 population by counties—1918 and 1919.

COUNTIES AND CITIES.	1918.			1919.		
	Population.	Births.	Birth rate per 1,000.	Population.	Births.	Birth rate per 1,000.
STATE TOTALS.....	1,734,341	39,696	22.9	1,759,793	37,146	21.1
Allen, <i>except</i>	16,957	287	16.9	16,193	283	17.5
Iola.....	9,291	198	21.3	9,479	155	16.4
Anderson.....	12,230	264	21.6	12,456	233	18.7
Atchison, <i>except</i>	11,720	217	18.5	12,432	193	15.5
Atchison city.....	15,240	231	15.2	15,340	227	14.8
Barber.....	9,581	250	26.1	10,272	244	23.8
Barton, <i>except</i>	12,849	347	27.0	13,249	290	21.9
Great Bend.....	5,023	93	18.6	4,613	78	15.8
Bourbon, <i>except</i>	12,895	273	21.2	12,691	240	18.9
Fort Scott.....	12,325	231	18.7	12,839	244	19.0
Brown.....	20,933	472	22.5	21,317	413	19.4
Butler, <i>except</i>	24,863	517	20.8	25,819	557	21.5
Augusta.....	5,550	175	31.7	4,334	166	38.4
El Dorado.....	16,246	253	15.6	15,327	318	20.7
Chase.....	6,641	178	26.9	6,921	150	21.6
Chautauqua.....	10,798	217	20.1	10,894	237	21.8
Cherokee, <i>except</i>	29,103	721	24.8	30,130	589	19.5
Galena.....	5,120	145	28.4	4,925	112	22.7
Cheyenne.....	4,939	149	30.4	5,418	154	28.5
Clark.....	5,048	133	26.4	5,174	113	21.9
Clay.....	15,196	344	22.6	15,239	310	20.4
Cloud, <i>except</i>	13,493	264	19.6	13,492	266	19.7
Concordia.....	4,321	110	25.5	4,500	102	22.7
Coffey.....	15,330	286	18.7	15,031	300	20.0
Comanche.....	5,353	90	16.8	5,055	108	21.4
Cowley, <i>except</i>	13,953	321	23.0	16,343	286	17.5
Arkansas City.....	9,311	251	25.6	10,703	226	21.2
Winfield.....	7,237	163	22.3	8,323	202	24.3
Crawford, <i>except</i>	42,313	1,047	24.5	42,327	987	23.3
Pittsburg.....	18,043	340	18.8	17,922	287	16.0
Decatur.....	8,023	200	25.0	8,005	195	24.4
Dickinson.....	26,112	576	22.0	25,874	552	21.4
Doniphan.....	16,616	295	17.8	15,576	297	19.1
Douglas, <i>except</i>	11,631	202	17.2	11,670	138	11.8
Lawrence.....	13,456	193	14.2	13,394	187	14.0
Edwards.....	6,365	181	26.3	6,594	169	25.7
Elk.....	10,202	210	20.6	10,343	150	14.5
Ellis.....	13,843	448	32.4	14,130	396	17.8
Ellsworth.....	10,133	261	25.7	10,035	217	21.6
Finney.....	7,434	194	26.1	8,197	171	20.9
Ford, <i>except</i>	9,511	219	23.0	9,133	236	25.9
Dodge City.....	4,300	157	32.7	4,643	160	34.4
Franklin, <i>except</i>	13,311	241	17.5	13,319	193	13.9
Ottawa.....	9,439	163	17.7	9,532	188	19.3
Geary <i>except</i>	4,237	107	25.0	6,234	113	18.1
Junction City.....	8,507	196	23.1	7,119	179	25.1
Gove.....	4,645	130	28.0	4,973	94	18.9
Graham.....	7,203	199	27.6	7,153	175	24.5
Grant.....	1,094	20	18.3	1,095	19	17.4
Gray.....	4,592	130	28.4	4,213	113	23.0
Greeley.....	1,143	17	14.9	1,196	6	5.1
Greenwood.....	15,041	343	23.2	15,011	307	20.5
Hamilton.....	2,540	33	32.0	2,430	67	27.1
Harper.....	12,693	313	24.7	13,603	233	21.2
Harvey, <i>except</i>	10,536	227	21.5	10,317	230	21.3
Newton.....	8,133	233	25.6	8,254	330	40.0
Haskell.....	1,720	52	30.3	1,524	50	32.3
Hodgeman.....	3,739	107	27.2	3,573	99	27.7
Jackson.....	14,663	314	21.4	15,017	293	19.3
Jefferson.....	15,063	305	20.3	15,047	232	18.7
Jewell.....	15,963	349	21.8	16,011	232	17.6
Johnson.....	17,129	245	14.3	17,303	257	14.8
Kearny.....	2,593	53	22.4	2,595	57	22.0
Kingman.....	11,300	276	24.5	11,633	259	22.3
Kiowa.....	6,233	165	26.3	6,176	154	25.0
Labette, <i>except</i>	17,945	359	20.0	17,617	342	19.4
Parsons.....	17,236	337	19.5	16,445	317	19.3

TABLE No. 6.—CONCLUDED. Showing population, births and birth rates per 1,000 population by counties—1918 and 1919.

COUNTIES AND CITIES.	1918.			1919.		
	Population.	Births.	Birth rate per 1,000.	Population.	Births.	Birth rate per 1,000.
Lane.....	2,488	84	34.0	2,448	70	28.6
Leavenworth, <i>except</i>	19,281	282	14.6	19,625	227	11.6
Leavenworth city.....	21,849	839	15.5	22,000	814	14.3
Lincoln.....	10,080	250	24.3	10,027	198	19.7
Linn.....	15,083	289	19.2	15,408	282	18.3
Logan.....	8,521	85	24.1	8,272	55	16.8
Lyon, <i>except</i>	15,108	381	21.9	14,659	285	19.5
Emporia.....	10,842	249	23.0	11,031	245	22.2
Marion.....	21,519	521	24.2	22,009	467	21.2
Marshall.....	21,883	480	21.9	22,283	419	18.9
McPherson.....	21,775	497	22.8	22,972	428	18.7
Meade.....	5,740	133	23.2	5,544	156	28.1
Miami.....	18,592	320	17.2	18,786	346	18.4
Mitchell.....	13,862	286	20.6	13,264	256	19.3
Montgomery, <i>except</i>	23,082	518	22.5	23,329	511	21.9
Coffeyville.....	18,465	251	18.6	16,053	253	15.8
Independence.....	11,505	357	31.0	12,354	331	26.8
Morris.....	12,163	247	20.3	12,049	241	20.0
Morton.....	2,517	67	26.6	2,843	45	19.2
Nemaha.....	18,413	406	22.0	19,381	373	19.2
Neosho, <i>except</i>	13,442	290	21.6	13,000	288	22.2
Chanute.....	10,400	258	24.8	10,538	225	21.4
Ness.....	6,998	200	28.6	7,006	188	26.8
Norton.....	11,398	239	21.0	10,947	193	17.6
Osage.....	20,544	339	13.3	20,028	322	16.1
Osborne.....	12,756	312	24.4	12,423	263	21.2
Ottawa.....	10,805	222	20.5	10,599	192	18.1
Pawnee.....	9,217	225	24.4	8,847	237	26.8
Phillips.....	12,582	308	19.8	12,183	254	20.9
Pottawatomie.....	15,284	362	23.7	15,427	340	22.0
Pratt.....	12,136	312	25.7	12,030	264	21.9
Rawlins.....	6,324	165	26.0	6,149	151	24.5
Reno, <i>except</i>	20,771	506	18.3	21,696	471	21.7
Hutchinson.....	23,401	440	18.8	25,242	458	18.1
Republic.....	16,408	301	18.3	15,876	320	20.2
Rice.....	13,914	325	23.2	14,509	312	21.5
Riley, <i>except</i>	9,723	219	22.5	9,559	170	17.8
Manhattan.....	7,959	210	26.4	7,248	160	22.1
Rooks.....	10,127	212	20.9	10,026	188	18.7
Rush.....	8,139	259	31.8	8,281	188	22.7
Russell.....	11,129	244	21.9	10,604	252	23.8
Saline, <i>except</i>	10,311	225	21.8	10,074	207	20.5
Salina.....	13,278	348	26.2	14,190	303	21.4
Scott.....	3,184	80	25.1	3,093	60	19.4
Sedgwick, <i>except</i>	19,227	426	22.1	20,089	432	21.5
Wichita.....	62,404	1,480	23.7	64,296	1,410	21.9
Seward.....	6,006	171	28.5	6,239	171	27.4
Shawnee, <i>except</i>	19,591	376	19.2	19,792	337	17.0
Topeka.....	46,741	1,087	26.8	46,741	970	20.8
Sheridan.....	5,300	131	24.7	5,155	123	23.9
Sherman.....	4,821	111	23.0	5,309	88	16.6
Smith.....	15,025	348	23.2	15,183	323	21.3
Stafford.....	11,272	267	23.7	11,681	273	23.4
Stanton.....	1,016	27	26.6	1,038	10	9.6
Stevens.....	3,331	93	27.9	3,854	106	27.5
Sumner, <i>except</i>	20,770	491	23.7	21,602	419	19.4
Wellington.....	5,507	122	22.2	6,807	140	22.2
Thomas.....	5,008	130	26.0	5,088	136	26.7
Trego.....	6,151	163	26.5	6,012	145	24.1
Wabaunsee.....	11,530	269	23.3	11,556	248	21.4
Wallace.....	2,219	47	21.2	2,167	57	26.3
Washington.....	18,606	405	21.7	17,608	397	22.5
Wichita.....	1,826	37	20.3	1,818	41	22.5
Wilson.....	20,600	432	21.0	20,473	525	25.6
Woodson.....	9,196	201	21.0	9,489	191	20.1
Wyandotte, <i>except</i>	9,547	183	19.7	10,728	155	14.5
Kansas City.....	93,121	1,921	20.6	96,453	2,059	21.3
Rosedale.....	7,584	144	19.0	7,741	132	17.1

TABLE No. 7A. Showing the births, by counties, by sex, color and parent nativity, 1918.

NOTE.—Does not include 1304 delayed reports.

COUNTIES AND CITIES.	Sex.		Color.			Nativity of—			
	Male.	Female.	White.	Black.	Indian.	Father.		Mother.	
						Native.	Foreign.	Native.	Foreign.
STATE TOTALS.....	19,766	18,626	37,435	926	31	35,463	2,929	36,150	2,242
Allen, except.....	154	133	278	9	0	279	8	283	4
Iola.....	109	89	193	5	0	194	4	195	3
Anderson.....	139	125	263	1	0	255	9	258	6
Atchison, except.....	105	112	209	8	0	206	12	211	6
Atchison city.....	111	120	213	15	3	211	20	219	12
Barber.....	113	137	249	1	0	238	12	240	10
Barton, except.....	174	173	345	2	0	277	70	298	49
Great Bend.....	43	50	92	1	0	86	7	90	3
Bourbon, except.....	146	127	271	2	0	268	5	271	2
Fort Scott.....	117	114	215	16	0	227	4	227	4
Brown.....	244	228	455	12	5	435	37	442	30
Butler, except.....	284	233	517	0	0	495	22	502	15
Augusta.....	91	84	175	0	0	168	7	172	3
El Dorado.....	130	123	251	1	1	243	10	244	9
Chase.....	86	92	178	0	0	173	5	171	7
Chautauqua.....	113	104	215	1	1	215	2	216	1
Cherokee, except.....	362	359	706	14	1	649	72	660	61
Galena.....	65	80	136	8	1	142	3	144	1
Cheyenne.....	74	75	149	0	0	132	17	138	11
Clark.....	75	58	133	0	0	131	2	131	2
Clay.....	158	186	343	1	0	324	20	331	13
Cloud, except.....	129	135	264	0	0	256	8	258	6
Concordia.....	51	59	109	1	0	107	3	106	4
Coffey.....	141	145	286	0	0	276	10	281	5
Comanche.....	41	49	90	0	0	87	3	88	2
Cowley, except.....	163	158	321	0	0	313	8	318	8
Arkansas City.....	116	135	241	9	1	234	17	238	13
Winfield.....	87	76	155	8	0	156	7	156	7
Crawford, except.....	548	499	1,036	11	0	791	256	835	212
Pittsburg.....	172	168	327	13	0	316	24	318	22
Decatur.....	97	103	200	0	0	186	14	193	7
Dickinson.....	314	262	573	3	0	524	52	541	35
Doniphan.....	142	153	282	13	0	284	11	283	12
Douglas, except.....	102	100	196	6	0	198	4	202	0
Lawrence.....	99	94	172	21	0	188	5	189	4
Edwards.....	97	84	179	2	0	173	8	173	8
Elk.....	108	102	210	0	0	199	11	198	12
Ellis.....	226	222	448	0	0	364	84	387	61
Ellsworth.....	134	127	257	4	0	218	43	227	34
Finney.....	91	103	190	4	0	164	30	174	20
Ford, except.....	122	97	219	0	0	203	16	205	14
Dodge City.....	91	66	154	3	0	147	10	150	7
Franklin, except.....	124	117	239	2	0	230	11	231	10
Ottawa.....	97	71	166	3	0	161	7	161	7
Geary, except.....	52	55	105	2	0	100	7	102	5
Junction City.....	98	98	182	13	1	189	7	190	6
Gove.....	59	71	130	0	0	111	19	115	15
Graham.....	89	110	189	10	0	181	18	191	8
Grant.....	10	10	19	1	0	20	0	20	0
Gray.....	63	67	130	0	0	125	5	128	2
Greeley.....	9	8	17	0	0	17	0	17	0
Greenwood.....	187	161	348	0	0	340	8	343	5
Hamilton.....	49	34	83	0	0	79	4	82	1
Harper.....	161	152	313	0	0	307	6	306	7
Harvey, except.....	111	116	226	1	0	196	31	205	22
Newton.....	135	148	269	14	0	259	24	265	18
Haakell.....	30	22	52	0	0	50	2	49	3
Hodgeman.....	61	46	104	3	0	97	10	101	6
Jackson.....	163	151	301	3	10	297	17	307	7
Jefferson.....	145	160	298	7	0	301	4	303	2
Jewell.....	155	194	349	0	0	341	8	344	5
Johnson.....	133	112	230	15	0	232	13	229	16
Kearny.....	29	29	58	0	0	50	8	53	5
Kingman.....	140	136	274	2	0	268	8	269	7
Kiowa.....	73	92	165	0	0	161	4	164	1
Labette, except.....	193	166	354	3	2	354	5	352	7
Parsons.....	190	147	313	24	0	322	15	321	16

TABLE No. 7A—CONCLUDED. Births by sex, color and parent nativity, 1918.

COUNTIES AND CITIES.	Sex.		Color.			Nativity of—			
	Male.	Female.	White.	Black.	Indian.	Father.		Mother.	
						Native.	Foreign.	Native.	Foreign.
Lane.....	45	39	84	0	0	83	1	84	0
Leavenworth, except.....	152	130	278	4	0	259	23	271	11
Leavenworth city.....	174	165	292	47	0	308	31	319	20
Lincoln.....	140	110	250	0	0	240	10	241	9
Linn.....	144	145	283	6	0	288	1	288	1
Logan.....	46	39	82	3	0	80	5	78	7
Lyon, except.....	169	162	328	5	0	319	12	323	8
Emporia.....	132	117	239	20	0	233	16	238	11
Marion.....	276	245	516	5	0	410	111	441	80
Marshall.....	246	234	476	4	0	463	17	466	14
McPherson.....	246	251	497	0	0	443	54	459	38
Meade.....	71	62	133	0	0	120	13	128	5
Miami.....	171	149	316	4	0	308	12	311	9
Mitchell.....	156	130	286	0	0	272	14	279	7
Montgomery, except.....	262	256	504	14	0	489	29	492	26
Coffeyville.....	178	179	340	17	0	349	8	350	7
Independence.....	118	133	231	18	2	241	10	246	5
Morris.....	143	104	244	3	0	236	11	243	4
Morton.....	37	30	67	0	0	64	3	67	0
Nemaha.....	194	212	404	2	0	372	34	377	29
Neosho, except.....	156	134	289	1	0	278	12	278	12
Chanute.....	122	136	259	8	0	249	9	250	8
Ness.....	113	87	200	0	0	184	16	188	12
Norton.....	114	125	239	0	0	231	8	234	5
Osage.....	187	152	333	6	0	314	24	323	16
Osborne.....	165	147	310	2	0	307	5	311	1
Ottawa.....	108	114	222	0	0	213	9	214	8
Pawnee.....	132	93	220	5	0	211	14	212	13
Phillips.....	172	136	308	0	0	291	17	293	15
Pottawatomie.....	181	181	361	1	0	326	36	341	21
Pratt.....	177	135	306	6	0	308	4	307	5
Rawlins.....	83	82	165	0	0	139	26	146	19
Reno, except.....	262	244	506	0	0	480	26	489	17
Hutchinson.....	232	208	420	20	0	411	29	414	26
Republic.....	156	145	301	0	0	269	32	277	24
Rice.....	175	150	316	9	0	301	24	306	19
Riley, except.....	113	106	217	2	0	206	13	208	11
Manhattan.....	119	91	205	5	0	203	7	208	2
Rooks.....	111	101	210	2	0	205	7	211	1
Rush.....	154	105	259	0	0	208	51	214	45
Russell.....	142	102	242	2	0	205	39	208	36
Salina, except.....	118	107	224	1	0	209	16	217	8
Salina.....	172	176	338	10	0	326	22	332	16
Scott.....	42	38	80	0	0	74	6	76	4
Sedgwick, except.....	221	205	424	2	0	392	34	409	17
Wichita.....	775	705	1,396	82	2	1,399	81	1,420	60
Seward.....	84	87	171	0	0	162	9	165	6
Shawnee, except.....	193	183	362	14	0	359	17	362	14
Topeka.....	563	524	1,013	74	0	941	146	961	126
Sheridan.....	60	71	130	1	0	126	5	127	4
Sherman.....	58	53	111	0	0	105	6	110	1
Smith.....	168	180	348	0	0	340	8	343	5
Stafford.....	134	133	265	2	0	257	10	259	8
Stanton.....	14	13	26	1	0	26	1	27	0
Stevens.....	56	37	89	4	0	91	2	91	2
Sumner, except.....	260	231	489	2	0	485	6	485	6
Wellington.....	67	55	119	2	1	113	9	116	6
Thomas.....	71	59	129	1	0	124	6	126	4
Trego.....	79	84	163	0	0	117	46	128	35
Wabaunsee.....	140	129	255	14	0	254	15	263	6
Wallace.....	29	18	45	2	0	45	2	46	1
Washington.....	196	209	405	0	0	371	34	388	17
Wichita.....	18	19	37	0	0	36	1	34	3
Wilson.....	201	231	431	1	0	422	10	426	6
Woodson.....	117	84	199	2	0	198	3	196	5
Wyandotte, except.....	111	77	173	15	0	172	16	176	12
Kansas City.....	964	957	1,751	170	0	1,550	371	1,591	330
Rosedale.....	61	83	137	7	0	134	10	137	7

TABLE No. 7B. Showing the births, by counties, by sex, color and parent nativity, 1919.

NOTE.—Does not include 1113 delayed reports.

COUNTIES AND CITIES.	Sex.		Color.			Nativity of—			
	Male.	Female.	White.	Black.	Indian.	Father.		Mother.	
						Native.	Foreign.	Native.	Foreign.
STATE TOTALS.....	18,489	17,544	35,081	911	41	83,045	2,988	33,722	2,311
Allen, <i>except</i>	134	149	275	8	0	276	7	277	6
Iola.....	85	70	151	4	0	153	2	152	3
Anderson.....	113	120	232	1	0	228	5	228	5
Atchison, <i>except</i>	94	99	191	2	0	184	9	188	5
Atchison city.....	101	126	202	25	0	215	12	214	13
Barber.....	126	118	244	0	0	231	13	231	13
Barton, <i>except</i>	148	142	288	2	0	239	51	244	46
Great Bend.....	35	38	70	3	0	68	5	69	4
Bourbon, <i>except</i>	111	129	237	3	0	237	3	236	4
Fort Scott.....	127	117	222	22	0	239	5	240	4
Brown.....	220	193	403	6	4	383	30	391	22
Butler, <i>except</i>	287	270	557	0	0	544	13	548	9
Augusta.....	91	75	166	0	0	154	12	157	9
El Dorado.....	168	150	315	3	0	313	5	311	7
Chase.....	68	82	148	2	0	140	10	144	6
Chautauqua.....	127	110	237	0	0	236	1	236	1
Cherokee, <i>except</i>	300	289	576	13	0	539	50	554	35
Galena.....	56	56	109	3	0	112	0	112	0
Chevenne.....	75	79	154	0	0	140	14	141	13
Clark.....	57	56	113	0	0	109	4	111	2
Clay.....	156	154	310	0	0	287	23	298	12
Cloud, <i>except</i>	130	136	266	0	0	255	11	261	5
Concordia.....	42	60	102	0	0	99	3	99	3
Coffey.....	161	139	299	1	0	288	12	293	7
Comanche.....	51	57	108	0	0	104	4	106	2
Cowley, <i>except</i>	155	131	284	2	0	279	7	281	5
Arkansas City.....	121	105	219	7	0	210	16	211	15
Winfield.....	102	100	199	8	0	187	15	191	11
Crawford, <i>except</i>	492	495	969	18	0	714	273	775	212
Pittsburg.....	148	139	278	9	0	259	28	269	18
Decatur.....	100	95	195	0	0	186	9	193	2
Dickinson.....	275	277	549	3	0	496	56	504	48
Doniphan.....	137	160	282	12	3	283	14	293	4
Douglas, <i>except</i>	82	56	132	4	2	136	2	138	0
Lawrence.....	88	99	172	15	0	179	8	182	5
Edwards.....	83	86	169	0	0	161	8	164	5
Elk.....	79	71	150	0	0	140	10	139	11
Ellis.....	203	193	395	1	0	313	83	337	59
Ellsworth.....	120	97	217	0	0	188	29	196	21
Finney.....	85	86	166	5	0	149	22	151	20
Ford, <i>except</i>	122	114	236	0	0	205	31	211	25
Dodge City.....	75	85	153	7	0	146	14	153	7
Franklin, <i>except</i>	102	91	192	0	1	191	2	191	2
Ottawa.....	104	84	178	10	0	183	5	183	5
Geary, <i>except</i>	55	58	111	2	0	110	3	110	3
Junction City.....	86	93	169	10	0	158	21	159	20
Gove.....	54	40	94	0	0	77	17	82	12
Graham.....	95	80	168	7	0	163	12	166	9
Grant.....	6	13	19	0	0	19	0	19	0
Gray.....	59	59	115	3	0	113	5	112	6
Greeley.....	4	2	6	0	0	6	0	6	0
Greenwood.....	147	160	306	0	1	299	8	304	3
Hamilton.....	32	35	67	0	0	61	6	64	3
Harper.....	148	140	288	0	0	271	17	274	14
Harvey, <i>except</i>	113	117	229	1	0	204	26	211	19
Newton.....	172	158	316	14	0	291	39	291	39
Haskell.....	24	26	50	0	0	48	2	48	2
Hodgeman.....	47	52	99	0	0	92	7	93	6
Jackson.....	156	142	273	3	22	286	12	292	6
Jefferson.....	148	134	281	1	0	272	10	274	8
Jewell.....	155	127	282	0	0	276	6	278	4
Johnson.....	148	109	248	9	0	241	16	242	15
Kearny.....	31	26	57	0	0	48	9	50	7
Kingman.....	135	124	257	2	0	245	14	251	8
Kiowa.....	90	64	154	0	0	149	5	153	1
Labette, <i>except</i>	171	171	329	13	0	338	4	339	3
Parsons.....	154	163	287	30	0	298	19	299	18

TABLE No. 7B—CONCLUDED. Births by sex, color and parent nativity, 1919.

COUNTIES AND CITIES.	Sex.		Color.			Nativity of—			
	Male.	Female.	White.	Black.	Indian.	Father.		Mother.	
						Native.	Foreign.	Native.	Foreign.
Lane.....	36	34	70	0	0	69	1	70	0
Leavenworth, <i>except</i>	122	105	221	6	0	217	10	219	8
Leavenworth city.....	158	156	282	32	0	278	36	292	22
Lincoln.....	101	97	198	0	0	189	9	191	7
Linn.....	133	149	277	5	0	278	4	278	4
Logan.....	32	23	52	3	0	52	3	53	2
Lyon, <i>except</i>	138	147	283	2	0	263	22	273	12
Emporia.....	136	109	228	17	0	225	20	227	18
Marion.....	230	237	467	0	0	364	103	400	67
Marshall.....	212	207	417	2	0	399	20	406	13
McPherson.....	222	206	428	0	0	376	52	406	22
Meade.....	71	85	156	0	0	151	5	152	4
Miami.....	179	167	336	10	0	338	8	337	9
Mitchell.....	129	127	256	0	0	247	9	248	8
Montgomery, <i>except</i>	278	233	501	10	0	475	36	482	29
Coffeyville.....	168	163	304	26	1	327	4	326	5
Independence.....	137	116	239	14	0	244	9	244	9
Morris.....	117	124	233	8	0	230	11	234	7
Morton.....	23	22	45	0	0	45	0	45	0
Nemaha.....	202	171	369	4	0	342	31	352	21
Neosho, <i>except</i>	128	160	287	1	0	284	4	283	5
Chanute.....	108	117	221	4	0	209	16	211	14
Ness.....	96	92	188	0	0	154	34	163	25
Norton.....	96	97	193	0	0	187	6	189	4
Osage.....	162	160	316	4	2	297	25	302	20
Osborne.....	139	124	263	0	0	254	9	259	4
Ottawa.....	108	84	192	0	0	186	6	188	4
Pawnee.....	117	120	233	4	0	221	16	228	9
Phillips.....	122	132	254	0	0	248	6	248	6
Pottawatomie.....	185	155	336	2	2	319	21	328	12
Pratt.....	123	141	257	7	0	259	5	260	4
Rawlins.....	88	63	151	0	0	134	17	138	13
Reno, <i>except</i>	232	239	470	0	1	448	23	460	11
Hutchinson.....	222	236	430	28	0	425	33	428	30
Republic.....	155	165	320	0	0	285	35	294	26
Rice.....	160	152	310	2	0	296	16	293	19
Riley, <i>except</i>	85	85	169	1	0	148	22	159	11
Manhattan.....	75	85	152	8	0	152	8	154	6
Rooks.....	95	93	185	3	0	180	8	182	6
Rush.....	90	98	188	0	0	147	41	151	37
Russell.....	133	119	250	2	0	193	59	206	46
Saline, <i>except</i>	102	105	206	1	0	195	12	194	13
Salina.....	165	138	297	6	0	278	25	286	17
Scott.....	23	37	60	0	0	55	5	54	6
Sedgwick, <i>except</i>	211	221	430	2	0	410	22	416	16
Wichita.....	747	663	1,341	68	1	1,333	77	1,343	67
Seward.....	94	77	171	0	0	166	5	169	2
Shawnee, <i>except</i>	168	169	316	21	0	314	23	316	21
Topeka.....	493	477	904	65	1	810	160	848	122
Sheridan.....	73	50	123	0	0	113	10	116	7
Sherman.....	49	39	88	0	0	84	4	85	3
Smith.....	166	157	323	0	0	308	15	316	7
Stafford.....	140	133	270	3	0	263	10	265	8
Stanton.....	7	3	10	0	0	10	0	10	0
Stevens.....	56	50	102	4	0	105	1	104	2
Sumner, <i>except</i>	206	213	417	2	0	401	18	405	14
Wellington.....	80	60	135	5	0	131	9	134	6
Thomas.....	72	64	136	0	0	132	4	134	2
Trego.....	81	64	144	1	0	113	32	126	19
Wabaunsee.....	134	114	238	10	0	225	23	234	14
Wallace.....	30	27	54	3	0	52	5	55	2
Washington.....	199	198	396	1	0	370	27	379	18
Wichita.....	22	19	41	0	0	37	4	39	2
Wilson.....	273	252	521	4	0	517	8	518	7
Woodson.....	95	96	191	0	0	183	8	188	3
Wyandotte, <i>except</i>	84	71	143	12	0	141	14	141	14
Kansas City.....	1,138	921	1,872	187	0	1,604	455	1,646	413
Rosedale.....	72	60	110	22	0	117	15	122	10

TABLE No. 8. Showing comparison of birth rates per 1,000 population, by counties, for the five-year period 1915 to 1919, inclusive.

					On.
					1915.
					22.2
					22.7
					20.8
					17.7
					15.2
					25.6
					24.5
					19.9
					19.5
					22.2
					20.8
					22.6
					22.2
					23.7
					22.9
					20.8
					22.6
					24.2
					18.0
					24.1
					22.8
					25.0
					18.4
					25.8
					22.1
					22.6
					15.6
					15.0
					23.5
					19.9
					27.4
					25.3
					17.5
					29.3
					19.1
					23.0
Junction City.	25.1	23.1	23.7	28.9	30.4
Gove	18.9	28.0	29.8	29.9	27.5
Graham	24.6	27.6	14.7	22.1	11.1
Grant	17.4	18.3	32.6	28.7	24.0
Gray	28.0	23.4	16.9	24.3	11.1
Greeley	5.1	14.9	20.0	22.4	23.7
Greenwood	20.5	23.2	23.4	29.5	23.1
Hamilton	27.1	32.0	20.1	25.5	25.2
Harper	21.2	24.7	27.5	26.2	24.6
Harvey, except	21.3	21.6			
Newton	40.0	25.6			
Haskell	32.8	30.3	44.9	23.2	24.1
Hodgeman	27.7	27.2	28.1	27.9	27.6
Jackson	19.8	21.4	21.2	19.8	20.6
Jefferson	18.7	20.3	18.3	22.2	20.3
Jewell	17.6	21.3	24.1	24.6	22.7
Johnson	14.3	14.3	14.3	17.0	17.4
Kearny	22.0	22.4	23.9	25.5	27.6
Kingman	22.3	24.6	26.7	26.5	25.6
Kiowa	25.0	26.3	32.6	34.1	30.6
Labette, except	19.4	20.0	19.2	19.4	20.6
Parsons	19.3	19.5	18.6	20.5	22.1

TABLE No. 8—CONCLUDED. Birth rates, 1915 to 1919.

COUNTIES AND CITIES.	Birth rate per 1,000 population.				
	1919.	1918.	1917.	1916.	1915.
Lane.....	28.6	34.0	39.7	25.8	28.8
Leavenworth, <i>except</i>	11.6	14.6	14.8	14.6	16.4
Leavenworth city.....	14.3	15.5	14.2	14.1	15.0
Lincoln.....	19.7	24.3	23.6	27.5	25.8
Linn.....	18.8	19.2	10.9	20.1	19.2
Logan.....	16.8	24.1	15.1	28.5	20.5
Lyon, <i>except</i>	19.5	21.9	21.3	21.5	19.0
Emporia.....	22.2	23.0			
Marion.....	21.2	24.2	21.2	26.7	24.7
Marshall.....	18.9	21.9	20.9	23.6	19.9
McPherson.....	18.7	22.8	23.0	25.4	22.8
Meade.....	28.1	23.2	26.7	30.1	31.5
Miami.....	18.4	17.2	17.7	20.9	17.2
Mitchell.....	19.3	20.6	25.0	27.5	22.5
Montgomery, <i>except</i>	21.9	22.5	22.0	24.1	23.1
Coffeyville.....	15.8	18.6	25.0	21.2	17.6
Independence.....	26.8	31.0	19.5	22.8	16.0
Morris.....	20.0	20.3	25.0	22.9	22.5
Morton.....	19.2	26.6	21.2	23.8	15.0
Nemaha.....	19.2	22.0	21.2	25.4	22.6
Neosho, <i>except</i>	22.2	21.6	20.2	23.6	21.8
Chanute.....	21.4	24.8			
Ness.....	26.8	28.6	27.2	31.2	26.5
Norton.....	17.6	21.0	23.5	23.5	29.7
Osage.....	16.1	13.3	12.3	20.3	20.7
Osborne.....	21.2	24.4	23.2	23.1	22.8
Ottawa.....	18.1	20.5	24.1	25.3	21.0
Pawnee.....	26.8	24.4	26.7	29.1	21.4
Phillips.....	20.9	19.3	21.8	26.2	24.8
Pottawatomie.....	22.0	23.7	20.0	22.7	23.0
Pratt.....	21.9	25.7	23.0	30.9	21.9
Rawlins.....	24.5	26.0	23.7	22.4	23.2
Reno, <i>except</i>	21.7	18.3	26.2	23.2	25.1
Hutchinson.....	18.1	18.3	19.8	25.8	19.0
Republic.....	20.2	18.3	21.8	24.6	21.2
Rice.....	21.5	23.2	21.2	24.2	23.0
Riley, <i>except</i>	17.8	22.5	21.6	21.7	22.7
Manhattan.....	22.1	26.4			
Rooks.....	18.7	20.9	23.0	24.6	21.5
Rush.....	22.7	31.8	33.9	25.8	27.1
Russell.....	23.8	21.9	27.3	19.7	21.2
Saline, <i>except</i>	20.5	21.8	21.7	22.2	21.6
Salina.....	21.4	26.2			
Scott.....	19.4	25.1	22.1	23.5	24.0
Sedgwick, <i>except</i>	21.5	22.1	21.4	23.7	24.0
Wichita.....	21.9	23.7	25.0	22.4	19.6
Seward.....	27.4	28.5	26.1	34.8	26.9
Shawnee, <i>except</i>	17.0	19.2	19.8	22.4	17.2
Topeka.....	20.8	26.8	22.6	23.3	24.0
Sheridan.....	23.9	24.7	27.2	27.7	30.7
Sherman.....	16.6	23.0	22.2	26.6	22.5
Smith.....	21.3	23.2	24.0	24.7	25.7
Stafford.....	23.4	23.7	25.9	27.7	26.9
Stanton.....	9.6	26.6	14.4	36.3	31.6
Stevens.....	27.5	27.9	20.0	29.7	21.5
Sumner, <i>except</i>	19.4	23.7	24.6	25.4	24.9
Wellington.....	22.2	22.2			
Thomas.....	26.7	26.0	30.0	31.2	24.0
Trego.....	24.1	26.5	27.3	32.2	30.3
Wabaunsee.....	21.4	23.3	21.3	21.3	25.9
Wallace.....	26.3	21.2	33.4	24.4	23.7
Washington.....	22.5	21.7	23.1	21.8	22.0
Wichita.....	22.5	20.3	9.3	7.5	19.0
Wilson.....	25.6	21.0	21.6	25.7	23.7
Woodson.....	20.1	21.0	18.5	20.1	22.6
Wyandotte, <i>except</i>	14.5	19.7	19.9	19.3	19.2
Kansas City.....	21.3	20.6	22.6	29.5	22.9
Rosedale.....	17.1	19.0			

TABLE No. 9. Showing number of births, deaths of children under one year, and infant mortality rate, by counties, 1918 and 1919.

COUNTIES AND CITIES.	1918.			1919.		
	Births.	Deaths under 1 year.	Infant mortality rate.	Births.	Deaths under 1 year.	Infant mortality rate.
STATE TOTALS.....	39,696	3,118	78.5	37,146	2,546	68.5
Allen, <i>except</i>	287	26	90.5	283	22	77.7
Iola.....	198	16	80.8	155	15	96.8
Anderson.....	264	17	64.4	288	16	68.6
Atchison, <i>except</i>	217	14	64.5	193	11	57.0
Atchison city.....	231	24	104.0	227	18	79.3
Barber.....	250	18	72.1	244	15	61.5
Barton, <i>except</i>	847	22	68.5	290	17	58.6
Great Bend.....	93	6	64.5	73	11	150.7
Bourbon, <i>except</i>	273	17	62.3	240	18	75.0
Fort Scott.....	231	29	125.5	244	14	57.4
Brown.....	472	30	63.6	413	28	67.8
Butler, <i>except</i>	517	37	71.6	557	28	50.3
Augusta.....	175	23	131.4	166	23	138.5
El Dorado.....	253	42	166.1	318	32	100.7
Chase.....	178	7	39.3	150	12	80.0
Chautauqua.....	217	8	36.8	237	17	71.8
Cherokee, <i>except</i>	721	67	92.9	589	59	100.0
Galena.....	145	13	89.7	112	12	107.2
Cheyenne.....	149	8	53.7	154	8	148.1
Clark.....	133	6	45.2	113	8	70.7
Clay.....	344	21	61.1	310	18	58.1
Cloud, <i>except</i>	264	25	94.7	266	13	48.7
Concordia.....	110	8	72.7	102	6	58.8
Coffey.....	286	19	66.4	300	22	73.3
Comanche.....	90	7	77.8	108	6	55.5
Cowley, <i>except</i>	321	17	52.9	286	17	59.4
Arkansas City.....	251	27	107.5	226	18	79.6
Winfield.....	163	13	79.7	202	14	69.3
Crawford, <i>except</i>	1,047	100	95.6	987	68	69.1
Pittsburg.....	340	31	91.2	287	17	59.2
Decatur.....	200	18	65.0	195	9	46.1
Dickinson.....	576	47	81.7	552	42	75.8
Doniphan.....	295	23	77.9	297	24	80.8
Douglas, <i>except</i>	202	9	34.7	138	8	58.0
Lawrence.....	193	14	72.5	187	5	26.7
Edwards.....	181	9	49.7	169	9	53.2
Elk.....	210	18	85.7	150	9	60.0
Ellis.....	448	44	98.2	396	35	88.4
Ellsworth.....	261	21	80.5	217	14	64.6
Finney.....	194	17	87.6	171	20	116.8
Ford, <i>except</i>	219	14	63.9	236	15	63.6
Dodge City.....	157	5	31.8	160	15	93.8
Franklin, <i>except</i>	241	27	111.9	193	2	10.4
Ottawa.....	168	19	113.1	188	17	90.4
Geary, <i>except</i>	107	3	28.0	113	3	26.5
Junction City.....	196	23	142.9	179	12	67.0
Gove.....	130	4	30.8	94	7	74.5
Graham.....	199	17	85.3	175	8	45.7
Grant.....	20	2	100.0	19	.....	.....
Gray.....	130	12	92.4	118	5	42.4
Greeley.....	17	.....	.....	6	1	166.6
Greenwood.....	348	12	34.5	307	19	61.9
Hamilton.....	83	5	60.2	67	3	44.8
Harper.....	313	20	63.9	288	25	86.8
Harvey, <i>except</i>	227	5	22.0	230	18	78.2
Newton.....	283	22	77.8	330	25	75.8
Haskell.....	52	5	96.2	50	1	20.0
Hodgeman.....	107	7	65.4	99	5	50.5
Jackson.....	314	24	76.4	298	19	63.8
Jefferson.....	305	25	82.0	282	16	56.7
Jewell.....	349	24	68.8	282	12	42.6
Johnson.....	245	25	102.0	257	18	70.0
Kearny.....	58	3	51.8	57	2	35.1
Kingman.....	276	13	47.1	259	16	61.8
Kiowa.....	165	9	54.6	154	10	65.0
Labette, <i>except</i>	359	29	80.8	342	23	67.2
Parsons.....	337	43	127.7	317	29	91.4

TABLE No. 9—CONCLUDED. Infant mortality, 1918 and 1919.

COUNTIES AND CITIES.	1918.			1919.		
	Births.	Deaths under 1 year.	Infant mortality rate.	Births.	Deaths under 1 year.	Infant mortality rate.
Lane.....	84	2	23.8	70	4	57.1
Leavenworth, <i>except</i>	282	23	81.6	227	18	79.3
Leavenworth city.....	339	46	135.6	314	34	108.2
Lincoln.....	250	11	44.0	198	13	65.7
Linn.....	289	17	58.8	282	17	60.3
Logan.....	85	6	70.6	55	2	55.4
Lyon, <i>except</i>	331	21	63.4	285	15	52.6
Emporia.....	249	20	80.3	245	16	65.3
Marion.....	521	42	80.6	467	34	72.8
Marshall.....	480	33	68.8	419	27	64.5
McPherson.....	497	36	72.5	428	21	49.0
Meade.....	133	8	60.1	156	12	76.9
Miami.....	320	21	65.6	346	22	63.5
Mitchell.....	236	15	52.4	256	18	70.3
Montgomery, <i>except</i>	518	35	67.6	511	41	80.2
Coffeyville.....	251	28	111.4	253	20	87.0
Independence.....	357	29	81.3	331	21	63.5
Morris.....	247	11	44.5	241	16	66.4
Morton.....	67	13	194.1	45	4	88.9
Nemaha.....	406	32	78.8	373	22	59.1
Neosho, <i>except</i>	290	32	110.3	288	12	41.7
Chanute.....	258	34	131.6	225	24	106.6
Ness.....	200	7	35.0	188	10	53.1
Norton.....	239	21	87.8	193	10	51.9
Osage.....	339	33	39.2	322	15	46.6
Osborne.....	312	16	51.3	263	12	45.6
Ottawa.....	222	14	63.1	192	16	83.4
Pawnee.....	225	19	84.5	237	18	75.9
Phillips.....	308	19	61.7	254	12	47.2
Pottawatomie.....	362	25	69.1	340	13	38.3
Pratt.....	312	27	86.5	264	16	60.6
Rawlins.....	165	8	48.5	151	10	66.2
Reno, <i>except</i>	506	33	64.5	471	42	89.2
Hutchinson.....	440	38	86.3	453	41	89.5
Republic.....	301	11	36.5	320	18	56.2
Rice.....	325	29	89.3	312	20	64.1
Riley, <i>except</i>	219	18	82.2	170	7	41.1
Manhattan.....	210	18	85.7	160	7	43.7
Rooks.....	212	10	47.2	188	13	69.1
Rush.....	259	14	54.0	188	8	27.8
Russell.....	244	15	61.4	252	15	59.6
Saline, <i>except</i>	225	14	62.2	207	8	38.7
Salina.....	348	28	80.4	303	23	51.0
Scott.....	80	5	62.5	60	2	33.3
Sedgwick, <i>except</i>	426	29	68.1	432	24	55.5
Wichita.....	1,480	128	86.5	1,410	128	90.8
Seward.....	171	14	81.9	171	18	105.2
Shawnee, <i>except</i>	376	33	87.8	337	24	71.2
Topeka.....	1,087	109	100.8	970	75	77.3
Sheridan.....	131	6	45.8	123	7	56.9
Sherman.....	111	4	36.0	88	5	56.8
Smith.....	348	20	57.5	323	26	80.5
Stafford.....	267	27	101.1	273	27	98.9
Stanton.....	27	1	37.0	10		
Stevens.....	93	6	64.5	106	14	132.0
Sumner, <i>except</i>	491	34	69.2	419	19	45.4
Wellington.....	122	12	98.4	140	14	100.0
Thomas.....	130	5	38.5	136	5	36.8
Trego.....	163	8	49.1	145	8	55.2
Wabaunsee.....	269	35	130.0	248	9	36.8
Wallace.....	47	7	149.0	57	6	105.2
Washington.....	405	20	49.4	397	18	45.3
Wichita.....	37	3	81.1	41	3	73.1
Wilson.....	482	45	104.2	525	23	43.8
Woodson.....	201	18	89.6	191	10	52.4
Wyandotte, <i>except</i>	188	15	79.8	155	16	103.2
Kansas City.....	1,921	261	135.9	2,059	223	108.3
Rosedale.....	144	26	180.7	132	11	83.4

TABLE No. 10. Showing population, marriages and marriage rates per 1,000 population, by counties, 1918 and 1919.

COUNTIES.	1918.			1919.		
	Population.	Marriages.	Marriage rate per 1,000.	Population.	Marriages.	Marriage rate per 1,000.
STATE TOTALS.....	1,784,841	16,626	9.6	1,759,793	20,444	11.6
Allen.....	26,248	243	9.3	25,672	316	12.3
Anderson.....	12,230	97	7.9	12,456	134	10.7
Atchison.....	26,960	216	8.0	27,772	285	10.3
Barber.....	9,581	57	5.9	10,272	83	8.1
Barton.....	17,872	115	6.4	17,962	198	11.0
Bourbon.....	25,220	229	9.1	25,530	286	11.2
Brown.....	20,933	145	6.9	21,317	168	7.9
Butler.....	46,659	339	7.3	45,480	429	9.5
Chase.....	6,641	82	12.3	6,921	73	10.6
Chautauqua.....	10,798	83	7.7	10,894	111	10.2
Cherokee.....	34,228	330	9.6	35,105	384	10.9
Cheyenne.....	4,939	33	6.7	5,418	41	7.6
Clark.....	5,048	26	5.2	5,174	37	7.2
Clay.....	15,196	93	6.1	15,239	159	10.4
Cloud.....	17,819	120	6.7	17,992	194	10.8
Coffey.....	15,330	75	4.9	15,031	90	6.0
Comanche.....	5,353	38	7.1	5,055	53	10.5
Cowley.....	33,051	384	11.5	35,369	532	15.1
Crawford.....	60,866	513	8.4	60,249	575	11.2
Decatur.....	8,023	43	5.4	8,005	58	7.3
Dickinson.....	26,112	183	7.0	25,874	231	8.9
Doniphan.....	16,616	91	5.5	15,576	113	7.3
Douglas.....	25,087	305	12.2	25,064	342	13.7
Edwards.....	6,865	47	6.8	6,594	66	10.0
Elk.....	10,202	48	4.7	10,343	49	4.7
Ellis.....	13,843	68	4.9	14,180	176	12.4
Ellsworth.....	10,138	72	7.1	10,085	86	8.5
Finney.....	7,434	82	11.0	8,197	99	12.1
Ford.....	14,311	129	9.0	13,776	193	14.0
Franklin.....	23,300	211	9.1	23,351	244	10.5
Geary.....	12,794	691	54.0	13,353	307	23.0
Gove.....	4,645	14	3.1	4,973	20	4.0
Graham.....	7,203	44	6.1	7,158	54	7.5
Grant.....	1,094	5	4.6	1,095	6	5.5
Gray.....	4,592	19	4.1	4,213	31	7.4
Greeley.....	1,143	12	10.5	1,196	11	9.2
Greenwood.....	15,041	84	5.6	15,011	101	6.7
Hamilton.....	2,540	44	17.3	2,480	49	19.8
Harper.....	12,698	114	9.0	13,603	146	10.7
Harvey.....	18,769	353	18.8	19,071	464	24.3
Haskell.....	1,720	3	1.7	1,524	8	5.2
Hodgeman.....	8,739	7	1.9	8,578	19	5.3
Jackson.....	14,668	111	7.6	15,017	147	9.8
Jefferson.....	15,063	42	2.8	15,047	58	3.9
Jewell.....	15,963	59	3.7	16,011	102	6.4
Johnson.....	17,129	397	23.2	17,308	469	27.1
Kearny.....	2,593	12	4.6	2,595	12	4.6
Kingman.....	11,300	85	7.5	11,633	103	8.9
Kiowa.....	6,233	40	6.4	6,176	53	9.4
Labette.....	35,231	246	7.0	34,062	323	9.6
Lane.....	2,488	11	4.4	2,443	19	7.8
Leavenworth.....	41,130	731	17.8	41,625	623	15.0
Lincoln.....	10,030	53	5.3	10,027	86	8.6
Linn.....	15,033	64	4.2	15,408	65	4.2
Logan.....	3,521	9	2.6	3,272	14	4.3
Lyon.....	25,950	250	9.6	25,690	308	12.0
Marion.....	21,519	115	5.3	22,009	195	8.9
Marshall.....	21,883	142	6.5	22,233	193	8.7
McPherson.....	21,775	127	5.3	22,972	192	8.4
Meade.....	5,740	30	5.2	5,544	44	7.9
Miami.....	18,592	160	8.6	18,786	205	10.9
Mitchell.....	13,862	95	6.9	13,264	129	9.7
Montgomery.....	48,052	682	14.2	51,746	897	17.3
Morris.....	12,163	96	7.9	12,049	127	10.5
Morton.....	2,517	11	4.4	2,343	20	8.5
Nemaha.....	18,413	94	5.1	19,381	136	7.0

TABLE No. 10—CONCLUDED. Marriages and marriage rates, 1918 and 1919.

COUNTIES.	1918.			1919.		
	Population.	Marriages.	Marriage rate per 1,000.	Population.	Marriages.	Marriage rate per 1,000.
Neosho.....	23,842	144	6.0	23,538	172	7.3
Ness.....	6,998	43	6.2	7,006	60	8.6
Norton.....	11,398	114	10.0	10,947	131	12.0
Osage.....	20,544	69	2.7	20,023	76	3.8
Osborne.....	12,756	81	6.4	12,423	114	9.2
Ottawa.....	10,805	81	7.5	10,599	83	7.8
Pawnee.....	9,217	66	7.2	8,847	107	12.1
Phillips.....	12,582	79	6.3	12,133	114	9.4
Pottawatomie.....	15,284	54	3.5	15,427	56	3.6
Pratt.....	12,136	94	7.8	12,030	132	11.0
Rawlins.....	6,324	28	4.4	6,149	41	7.3
Reno.....	44,172	406	9.2	46,938	655	14.1
Republic.....	16,408	86	5.2	15,876	129	8.1
Rice.....	13,914	73	5.6	14,509	101	7.0
Riley.....	17,682	733	41.6	16,807	305	18.1
Rooks.....	10,127	70	6.9	10,026	99	9.9
Rush.....	8,139	35	4.3	8,231	56	6.8
Russell.....	11,129	58	5.2	10,604	79	7.5
Saline.....	23,589	274	11.6	24,264	335	15.9
Scott.....	3,184	26	8.2	3,093	23	9.0
Sedgwick.....	31,631	1,229	14.7	34,335	1,631	19.4
Seward.....	6,006	85	14.2	6,239	127	20.4
Shawnee.....	60,215	788	13.1	6,533	1,012	15.2
Sheridan.....	5,300	24	4.5	5,155	40	7.8
Sherman.....	4,821	49	10.2	5,309	64	12.1
Smith.....	15,025	85	5.7	15,133	136	9.0
Stafford.....	11,272	61	5.4	11,631	81	7.0
Stanton.....	1,016	10	9.9	1,033	4	3.9
Stevens.....	3,331	30	9.0	3,854	27	7.0
Sumner.....	26,277	179	6.8	27,909	302	10.8
Thomas.....	5,008	46	9.2	5,088	60	11.8
Trego.....	6,151	41	6.6	6,012	67	11.2
Wabaunsee.....	11,530	45	3.9	11,556	95	8.2
Wallace.....	2,219	14	6.3	2,167	21	9.7
Washington.....	18,606	79	4.2	17,608	133	7.6
Wichita.....	1,826	7	3.8	1,818	14	7.7
Wilson.....	20,600	129	6.2	20,473	231	11.3
Woodson.....	9,196	85	9.2	9,439	80	8.4
Wyandotte.....	110,252	1,467	13.0	114,922	1,845	16.1

Division of Food and Drugs.

Our annual reports for the two years have been complete; therefore we will attempt only to summarize the division's activities by adding together the work shown in the two annual reports.

For the two-year period 15,338 inspections were made by our traveling inspectors in 2,297 towns of 103 counties; 409 calls were made on county and city health and enforcement officials. The classification and grading of the inspections are shown in the following tabulation:

	<i>Good.</i>	<i>Good to fair.</i>	<i>Fair.</i>	<i>Poor.</i>	<i>Un- scored.</i>	<i>Total.</i>
Special milk samples	0	0	0	0	415	415
Bakeries	269	384	257	40	140	1,040
Bottlers	24	16	22	4	12	78
Confectioners	217	182	103	26	60	588
Drugs	869	581	843	12	41	1,846
Groceries	2,115	1,811	1,012	59	101	5,098
Groceries and meats	462	575	416	11	66	1,530
Ice-cream factories	8	10	6	1	82	57
Meats	439	343	196	17	33	1,028
Slaughtering and packing houses	20	14	22	0	14	70
Soda fountains and sterilizers	49	73	114	4	402	642
Jail specials	0	0	0	0	75	75
Special factories, mills, miscellaneous,	0	0	0	0	8	8
Special dairy	0	0	0	0	10	10
Special egg and produce	12	21	69	105	1,076	1,288
Special fairs, stands, etc.	0	0	0	0	301	301
Special weights and measures	0	0	0	0	190	190
Special ice plants	0	0	0	0	132	132
Special linseed oil	0	0	0	0	7	7
Special restaurants and hotels	0	0	0	0	134	134
Special sanitary	0	0	0	0	1,619	1,619
Totals	4,484	3,960	2,560	279	4,868	16,151

The inspection of weights, scales and measures for the two years totals: Scales, 6,507; weights, 1,282; measures, 314—of which 25 scales, 2 weights and 3 measures were condemned.

Cases prosecuted for violation of laws of which we are charged with the enforcement, 260. Total fines assessed amounted to \$3,863.50, which sum goes into the general school fund. The violations are classified in the following table:

FOOD AND DRUG LAW.	
Sale or offering for sale of adulterated milk	50
Sale or offering for sale of dirty milk	2
Sale or offering for sale of substandard ice cream	17
Sale or offering for sale of decomposed meat	3
Sale or offering for sale of adulterated or misbranded drugs	10
Sale or offering for sale of eggs unfit for food	93
Sale or offering for sale of misbranded cider	1
Manufacture of adulterated ice cream	8
Failure to candle eggs	4
Total	188

WEIGHTS AND MEASURES LAW.	
Sale of short-weight bread	22
Sale of short-weight ice	2
Sale of short-weight butter	2
Use of incorrect measure	1
Use of incorrect scales	2
Total	29

SANITARY LAW.

Maintaining insanitary grocery	9
Maintaining insanitary bakery	8
Maintaining insanitary confections	1
Maintaining insanitary slaughter houses	3
Maintaining insanitary refrigerator	1
Display or sale of unprotected foods	20
Sidewalk display	1
Total	48

Official samples collected by our inspectors and analyzed at the food and drug laboratories at Lawrence and Manhattan, 1,549. A detailed report and the result of this work will appear in the laboratory reports.

Approximately 30,000 pounds of food stuffs and drug products were condemned by our inspectors as being unfit for human food or misbranded or adulterated within the meaning of the food and drugs act. The following table shows the classification and amount of each class condemned:

Condemnations, June, 1918, to June, 1920.

FOODS.

Baking powder	lbs.	172	Grape fruit		126
Butter	lbs.	24	Hamburger	lbs.	6
Butter, peanut	lbs.	115	Ham	lbs.	15
Beans, navy	lbs.	74	Horse radish, prepared	qts.	24
Beans, pink	lbs.	400	Jelly	lbs.	46
Beverages	gals.	131	Kraut	lbs.	30
Candy	lbs.	1,288	Lard and lard compound	lbs.	115
Casings	lbs.	100	Macaroni	lbs.	104
Cheese	lbs.	10	Milk, canned	lbs.	61
Coffee	lbs.	8	Milk, bottled	qts.	92
Catsup	gals.	2	Mince meat	lbs.	65
Cereals, breakfast	lbs.	4,158	Mustard	gals.	7
Cookies and crackers	lbs.	843	Nut meats	lbs.	38
Corn, pop	lbs.	800	Oleomargarine	lbs.	186
Cocoanut, whole	bbls.	1	Peanuts	lbs.	90
Cocoanut, shredded	lbs.	41	Peas, blackeye	lbs.	10,200
Egg substitutes	pkgs.	236	Pickles	gals.	107
Extracts, flavoring	bottles	103	Rice	lbs.	2,660
Fish, canned	lbs.	49	Sugar	lbs.	840
Fish, fresh	lbs.	57	Syrup	lbs.	85
Flour	lbs.	3,391	Vegetables, No. 3 cans	cans	8
Fruit, canned, No. 10	cans	53	Vegetables, No. 2 cans	cans	80
Fruit, canned, 2 1/4 lb.	cans	627	Walnuts, English	lbs.	25
Fruit, canned, 2 lb.	cans	68	Vermicilli	lbs.	12
Fruit, evaporated	lbs.	1,453	Vinegar	gals.	315
Fruit, fresh	lbs.	10	Yeast Foam	lbs.	2

DRUGS.

Elix. Saw Palmetto	lbs.	3	1 oz. cream tartar	doz.	4
Miscellaneous pharmaceuticals ..	lbs.	31	Sweet spirits of nitre	oz.	6
Kerosene cream	lbs.	3	Patent medicine	bottles	40
Wine special	lbs.	1	Roots, herbs and seeds	lbs.	18
F. E. digitalis	lb.	1 1/2	Syrups, medicinal	lbs.	37
Rhubarb, aromatic	lb.	1	Tinctures and spirits	lbs.	5

The inspectors and office force of this division have coöperated extensively with the Kansas City station of the United States Bureau of Chemistry in the procurement of evidence and in the collection of samples of interstate food and drug shipments.

The Royal Baking Powder Company, of New York, early in March, 1920, obtained a restraining order from the United States district court at Wichita, Kan., which had the effect of preventing this department from enforcing the food and drugs act against Dr. Price's "cream" baking powder. This case is being handled by Attorney John G. Egan, assistant attorney-general and attorney for the Board of Health, who has

been quite active in the defense of the case. A decision by the court on the permanent injunction is expected soon.

ANNUAL REPORT OF THE STATE FOOD LABORATORY,
LAWRENCE, KAN.

JUNE 30, 1918, TO JUNE 30, 1919.

The work for the year is summarized in the following table. The summary shows:

- (a) The kinds of products examined.
- (b) The number and kinds of samples received during each month of the year, and the total for the year.
- (c) The number of each kind of samples for each month and for the year.
- (d) The number of illegal samples for each month and for the year.

The total number of samples examined is an increase of 80 over the number given in the last annual report. The percentage of illegal samples shows an increase of about 18 per cent over that given in the last report, the percentages being 19.1 and 37.4, respectively.

Following are given the individual classes referred to in the table. Under each class are stated the individuals of the class where these differ in character, also remarks covering those samples classed as illegal:

BEVERAGES. (1) *Alcoholic Beverages.* These in the main were sent to the laboratory by those interested in the enforcement of the prohibitory law. The following table covers the points of interest connected with this class of samples:

<i>Sample and source.</i>	<i>Alcohol.</i>
Cider, Abilene	5.93
Cider, Abilene	5.03
Cider, Abilene	5.11
Cider, Topeka	6.64
Cider, Topeka	4.66
Cider, attorney-general	7.20
Cider, attorney-general	6.86
Cider, attorney-general	7.13
Cider, Lincoln	6.07
Cider, Marion county	6.00
Cider, Marion county	2.01
Cider, State Board of Health	5.03
Cider, Woodbine	4.66
Cider, State Board of Health	4.40
Cider, State Board of Health	5.40
Cider, attorney-general	3.63
Cider, Great Bend	6.57
Cordial, State Board of Health	0.65
Cider, Lawrence	3.56
Cider, Chapman	5.11
Cider, Abilene	5.93
Cider, Abilene	5.40
Cider, Abilene	6.14
Cider, Topeka	3.93
Cider, Ransom	4.10
Cider, attorney-general	3.78
Cider, attorney-general	0.32
"Bracer," Manchester	4.30
Carbonated, attorney-general	3.17
Carbonated, Marion county	5.40
Substitute for beer, ———	2.64
Cider, State Board of Health	3.29
Cider, Simpson	6.00
Cider, attorney-general	6.14
Cider, attorney-general	5.18
Cider, Hoisington	5.40
Cider, McDonald	2.71
Cordial, State Board of Health	0.65
Cider, attorney-general	3.56

	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	Total.	Illegal.
Beverages.....	15	7	10	16	4	3	1	0	1	1	5	0	63	42
Candy.....	0	0	0	0	4	0	0	0	0	0	0	0	4	1
Canned goods.....	1	0	0	0	1	0	0	5	0	1	0	0	8	3
Extracts.....	0	2	0	0	0	1	1	2	5	3	1	0	15	10
Grain products.....	0	3	1	2	0	0	3	0	0	1	0	0	10	1
Honey.....	0	0	0	0	0	0	0	0	3	1	0	0	4	0
Ice cream.....	0	15	10	15	0	0	0	0	0	0	8	4	52	25
Milk.....	7	15	1	11	29	11	0	57	30	21	13	58	253	88
Olive oil.....	0	0	0	0	10	1	0	3	0	0	0	0	14	0
Vinegar.....	4	0	1	0	13	10	2	3	0	1	8	11	53	15
Miscellaneous.....	6	5	0	1	1	5	3	7	18	5	3	4	58	16
Illegal.....	20	28	11	11	11	11	1	28	23	9	14	38	0	201
Totals.....	33	47	23	45	62	31	10	77	57	34	38	77	534	.....

(2) *Carbonated Beverages.* These include strawberry, lemon, orange, cream, ginger, root beer, near beer, Bevo, Schiller's Select, Apri-Cola, and orange crush sodas. Three of these contained saccharine, and were classed as illegal for that reason.

CANDY. Mints, Afternoon Mints, peanut candy. The sample of peanut candy contained worms, grit and other dirt.

CANNED GOODS. Salmon, corn, peas, tomatoes, blackberries, pears. Two cans of pears and one of blackberries were "swells."

EXTRACTS. Vanilla, lemon substitute, spirit of lemon, imitation vanilla, orange, lemon flavor with oil. Two "vanilla extracts" were imitation products, four contained added coloring matter; two lemon extracts contained no oil of lemon; one substitute lemon extract contained cottonseed oil instead of oil of sesame as was claimed.

GRAIN PRODUCTS. Corn flour, "Badex," corn meal, flour, graham crackers, macaroni, spaghetti, noodles. One sample of corn flour contained arsenic.

HONEY. Four samples. None classed illegal.

ICE CREAM. Twenty-five samples were found to be substandard as to fat content.

MILK. Of the eighty-eight samples classed illegal, thirty were watered, while the remainder were substandard as to fat content.

OLIVE OIL. The fourteen samples examined were found to comply with the standard.

VINEGAR. Twelve samples were abnormal in that they failed to comply with the standard for phosphates and alkalinity of ash. Three samples were substandard in acidity.

MISCELLANEOUS. Condensed milk, malted milk, egg substitute, raisins, lard, peanut-honey butter, Acidine, cream, oleo, washing mixture, syrup, butter, baking compound, Marshmallow Creme, powdered skim milk, catsup, cherries, stomach, evaporated milk.

One sample of sorghum contained a high percentage of corn syrup; a stomach contained strychnine; sample of cream was substandard as to fat content; two egg substitutes were misbranded; crushed cherries contained added color and flavor; nine samples of condensed milk contained less fat than the standard requires, while two samples were unfit for food; two samples of evaporated milk were substandard in fat content; two samples of catsup were high in yeasts and molds.

The efficiency of the laboratory during the past year has been not up to the standard, on account, in part, of insufficient help (a condition due partly to a lack of appropriation and partly to our inability to secure help) and in part to the fact that the analyst spent part of his time in S. A. T. C. work and in assisting in another department. The effect of smallness of appropriation will be felt also during the coming year, since the amount allowed is sufficient only for half-time assistance.

Respectfully submitted.

E. H. S. BAILEY.

W. S. LONG.

ANNUAL REPORT OF THE STATE FOOD LABORATORY.

KANSAS STATE AGRICULTURAL COLLEGE.

June 1, 1918, to June 1, 1919.

The following summarizes the work for the past year:

DAIRY PRODUCTS:	
Milk	298
Ice cream	85
Cream	7
Evaporated milk	8
Butter	1
	<hr/>
	349
SAUSAGE	18
MISCELLANEOUS:	
Bread crumbs	1
Purity powder	1
Malted milk	2
	<hr/>
	4
Total	<hr/>
	871

The total number of samples is less than usual this year, owing to the fact that the analyst's place was vacant for several months.

Because of the need for fats during the war and the demand for larger quantities of evaporated milk, the price of butter fat became very high. This condition naturally brought about an illegal lowering of the butter-fat content of ice cream. This tendency is being overcome by the Board of Health inspectors and by the state dairy commissioner. These departments, although limited in men for such large areas which they have to cover, are keeping the state in a sanitary and legal condition with regard to marketable foods.

Canned milks are coming on the market in increasing quantities, made up of evaporated skimmed milk and vegetable or nut oils. These carry the proper label of ingredients present and as such are legal and edible foods.

Whether ice cream is being made using vegetable oils in substitution for butter fat has not been determined, as we have worked first of all to bring the total fat requirement up to the legal standard. After that is accomplished a study will probably be made on added foreign fats in dairy products.

The laboratory is also doing considerable work for the state dairy commissioner on ice cream and cream in checking up ice-cream manufacturers and cream stations located over the state. It is to be understood that this work is not meant to handicap or injure the dairy manufacturing establishments, but to aid and build up, also to educate these industries to a standard which will make their products more salable.

F. S. CAMPBELL.

REPORT OF THE DRUG LABORATORY FOR 1918-'19.

Included in the general reports from the Drug Laboratory, published in the January, 1919, issue of the State Board of Health, there were 75 analyses reported, together with the notation of 156 special analyses which had been run by this laboratory.

These included pharmaceutical preparations, linseed oils, proprietary

articles, and special analyses consisting of material sent in by physicians and others duly authorized by the chief food and drug inspector.

Commencing in November and continuing until June, a series of analyses were made upon the well-known and important drug Gelsemium, hitherto incompletely investigated. The investigation was of a research character, tending toward a proper standardization of the drug itself and its preparations. This work is still incomplete, although all the preliminary analyses are now finished, so that the methods of standardization can be decided upon in the near future and will then be reported.

The Kansas Board of Administration called upon the laboratory for an investigation of paint standards. These were worked out and submitted to the secretary of the Board, who has gratefully acknowledged the benefit of this service to the Board of Administration. The standards included paints, varnishes, oils and stains. (For a summary of the results of drug analyses the reader is referred to drug analyses reports in the bulletins of the State Board of Health.

L. E. SAYRE, *Director.*

GEO. A. WATSON, *Chief Chemist.*

DIVISION OF CHILD HYGIENE.

Fourth Annual Report of the Director.

TOPEKA, KAN., July 1, 1919.

Dr. S J. Crumbine, Secretary State Board of Health:

SIR—It is my pleasure to transmit herewith the fourth annual report of the Division of Child Hygiene for the fiscal year July 1, 1918, to June 30, 1919.

During this year and part of the previous year the director of the Division of Child Hygiene served also as state chairman of Child Welfare Woman's Committee, Council of Defense. The staff of the division carried out much of the extensive program for Children's Year under the joint direction of the National Council of Defense, Child Conservation section, and the Children's Bureau. Unfortunately, no funds were appropriated by the State Council of Defense for this purpose, and as the work had to be done in addition to the regular work of the division, the double burden has been a heavy one.

In a short report it is impossible even to list all the activities of the Division of Child Hygiene, for the reason that practically every factor that influences the life of the community directly concerns child welfare and the baby death rate. Hence an infinite variety of problems are dealt with as a part of the daily routine. The principal divisions of the work have been as follows: Children's Year; public health car "Warren"; literature and distribution; correspondence; prenatal letters (confidential Registry); exhibits; baby weeks and examinations; crippled, defective and dependent children; school hygiene; children's legislation.

The Division of Child Hygiene has no field workers, except such limited trips as the director has been able to make. These activities have all been carried on from the office.

The baby death rate from the most common preventable cause has been greatly reduced in Kansas until it stands very close if not quite at the top in its low infant mortality rate. This reduction has been due mostly to better care of children, due in turn to the education of the mothers. This has led to a curious condition, which is shown in the following table:

	1916.	1917.	1918.
Deaths from congenital malformations and debility.....	1,462	1,394	1,376
Deaths from stillbirths	1,328	1,208	1,390
Deaths under one year from all other causes, including epidemic influenza	1,370	1,611	1,721

Out of every three babies who die in Kansas during the first year, one is born dead, one dies from congenital malformations and debility, and the third death is from all other causes combined. In other words, two-thirds of the baby deaths in Kansas during the first year are the results of something in the parents or from lack of care of the mother preceding the child's birth. A certain percentage of these baby deaths due to prenatal causes cost the mother's life also.

Part of these stillbirths and deaths from congenital debility and malformations are due to syphilis and to other communicable diseases, especially influenza and typhoid fever. What other causes are operating and for how much they are responsible we can only conjecture, but among them are too hard work of pregnant mothers, lack of prenatal supervision, lack of proper obstetrical service and hospital facilities for maternity cases. In other words, the deaths of more than 2,600 babies each year in Kansas can be summed up in lack of intelligent care.

It is not poverty in Kansas which is responsible for this condition. Kansas has been too busy "raising more corn, to feed more pigs, to buy more land, to raise more corn," for which there has always been abundant appropriation by the legislature. This state can also rear fine boys and girls, as the hundreds of "better babies" in Kansas will testify. The state can certainly spend as much on them as it spends upon live stock.*

There are about 600,000 children in Kansas whom the Division of Child Hygiene ought to serve. If the next session of the legislature should say, in effect, that each boy and girl was worth a dollar each, it would be none too much to spend protecting their health and fitting them to grow into perfect manhood and womanhood.

Figured in another way, there are nearly 4,000 babies under one year of age dying each year in Kansas. It costs, at the very lowest estimate, \$100 each to produce these babies, and probably three or four times that amount. In order to prevent this waste of babies' lives and their mothers' time, health, and sometimes life, Kansas could well afford to appropriate a half million dollars each year for child hygiene.

THE CHILDREN'S YEAR.

APRIL 6, 1918, TO JUNE 30, 1919.

The first anniversary of the beginning of the war, April 6, 1918, President Wilson decreed should be the beginning of Children's Year. Plans for saving the lives of 100,000 children were formulated by the National Children's Bureau. In the winter of 1918 the epidemic of influenza so interfered with the Children's Year program that the date was extended to July 1.

The quota for Kansas was 1,802 babies. The average number of deaths for children under five years of age for 1912 to 1916, both inclusive, was 3,955. The saving of 1,802 babies would mean the reduction of the mortality rate of this group by 50 per cent.

The Children's Year program has been conducted by the Children's Bureau through the National Woman's Committee, Council of Defense. The director of the Division of Child Hygiene was appointed state chairman of child welfare for Kansas, and in the dual capacity of these two offices Federal and state plans were coördinated into one big campaign.

CHILD WELFARE ORGANIZATION.

One of the first duties of the state chairman of child welfare, Council of Defense, was to appoint a county chairman of child welfare in each county. These county chairmen in turn appointed their captains in each

* The 1919 session of the legislature appropriated for live stock, \$25,000; for bees, \$8,000; for child hygiene, \$7,500.

ward, township or voting precinct. This organization then was ready and prepared to carry out the various "drives" of the Children's Year. In effecting this organization the state chairman of child welfare had the unfailing assistance and the untiring devotion to service of the state chairman of woman's committee, Council of Defense, Mrs. D. W. Mulvane, Topeka.

An effort was made to obtain as county chairmen of child welfare women who were especially interested in child welfare and who were willing to make it their special war service. The success of Children's Year in Kansas is largely due to the splendid efforts of these women.

The big feature of the Children's Year in Kansas was the house-to-house canvass for the entire state, using the four-blank system: (1) Application for Kansas Mothers' Book; (2) birth registration test; (3) application for prenatal letters; (4) information concerning care of crippled or defective children.

In counties where the health officer desired to have it undertaken and agreed to support the work, an additional blank was used for any communicable diseases. These blanks were returned to the Division of Epidemiology and were checked against the official returns for these diseases.

RESULTS OF CANVASS.

Kansas Mothers' Books sent out	12,172
Expectant mothers enrolled	947
Birth registrations checked	13,371
Crippled, defective and dependent children reported	209

This tabulation gives only the barest skeleton of the results attained by the canvass. The quickening of interest in mothers pertaining to children and general health was noticeable in most of the districts.

THE CHILDREN'S YEAR DRIVES.

As the work of the Children's Year extended over a considerable number of months, the various activities came in the form of "drives."

In August, 1918, the director of the Division of Child Hygiene was appointed state agent of the Children's Bureau. This appointment carried with it the franking privilege for all material relating to the Children's Year. This franking privilege enabled the division to carry on an extensive educational campaign by means of literature. The results of this are impossible to measure and to set down in terms of achievement, but is an important part of the preparation for better things for child welfare.

WEIGHING AND MEASURING TEST.

During Children's Year, in order to prevent duplication and to obtain an examination for as many babies as possible, the work was divided as follows: The State Federation of Women's Clubs, who have conducted "Baby Weeks" heretofore, undertook again to be responsible for the conduct of baby examinations; the State Woman's Christian Temperance Union undertook the weighing and measuring tests. Total number of babies examined, 5,615; total number of babies weighed and measured, 13,365; 242 towns in Kansas reported baby examinations and weighing and measuring tests to this office and to the Children's Bureau.

RESULTS.

The results of Children's Year cannot be set down in a statistical report. Because of the widespread epidemic of influenza and the greatly increased death rate of all ages in 1918, it is not possible to point out, or even to estimate, a definite saving of lives.

The results of Children's Year will come in another way. Its greatest achievement will be through the awakening of the public conscience and through stimulating the public interest in all matters pertaining to child welfare. The Children's Year marks the beginning of a new and better appreciation of the child.

CORRESPONDENCE.

Owing to the wide diversity of matters relating to child hygiene and welfare that find their way to the Division of Child Hygiene, the correspondence is large and varied. An average of more than twenty-five personally dictated letters are sent out each day. This is exclusive of the form and other circular letters.

The correspondence includes: Requests for literature, exhibits, slide lectures, material for club papers, and for information concerning examining babies and school children; requests for information regarding the care of expectant mothers, feeding of babies, care of sick children, treatment for crippled children and application for hospital care, treatment or commitment for feeble-minded children, cases of cruelty to children, children's institutions, and child placing; requests from other states for reports, for laws regarding children in Kansas, and a wide variety of other matters.

PRENATAL LETTERS.**EXPECTANT MOTHERS' REGISTRY.**

Experience has shown that medical and nursing supervision of the prenatal period reduces the infant mortality rate, especially from congenital causes, and that it also reduces the maternal death rate (80 per cent reported by Boston). It is not possible to supply prenatal clinics for many expectant mothers in Kansas. In an effort to encourage women to put themselves in the hands of their physicians early in their pregnancy and also to help them as well as we may by literature and letters, the Division of Child Hygiene established the prenatal service in 1916. To every woman who registers herself (or friend may register for her), giving the name, address and date of expected confinement, the Division of Child Hygiene sends nine prenatal letters. These letters are sent one each month, each one taking up the problems of that particular time. If the name is registered late all the letters for the previous months are sent at once, then the regular letters are sent in their proper order. With the fourth and fifth letters is sent "Prenatal Care," a pamphlet issued by the Children's Bureau, and directions for the baby's clothing; with the eighth letter a blank birth certificate is sent and with the ninth a Kansas Mothers' Book.

In addition to the regular letters and literature the expectant mothers are encouraged to write to the Division of Child Hygiene regarding little

problems perplexing them, and as to how to better care for themselves and their families. To know that one can get a quick and authoritative response in case of difficulty is a great comfort to the expectant mothers, many of whom are expectant for the first time and are perhaps miles removed from their own mothers and their doctors. Often, too, the expectant mother is warned that she needs to see her doctor at once. Thus valuable time is saved, and in more than one case the life of the mother and baby.

The friendly letters of appreciation that are received from the mothers, especially those who are many miles from their doctor, indicate that the prenatal letters are doing a real service and that they ought to reach every expectant mother in the state.

That better prenatal care is needed for the expectant mothers of Kansas is evident by the fact that the baby death rate from congenital causes is twice as high as the deaths under one year from all other causes combined.

Since the establishment of the expectant mothers' registry over 2,000 mothers have each received the nine letters and the pamphlets that accompany them. Most of these names were added during the last year as a result of the Children's Year campaign and the coöperation of the medical profession. Recently, in response to a letter to the physicians of the state, over 200 sent in the names of their expectant patients.

Friends of babies and mothers can do them no greater service, without cost to themselves, than to call the attention of the expectant mother to the expectant mothers' registry or to send her name for the letters and service.

EXHIBITS.

MISS EFFICIENCY. The baby doll, Miss Efficiency, and her complete layette has been much in demand. In her trunk Miss Efficiency carries a complete set of simple and correct patterns for baby garments, from which the mothers may cut patterns for their babies' clothes. Miss Efficiency comes to any group desiring her services for expenses only. She travels by express.

WALL CHARTS. Twelve colored posters on child hygiene.

SCHOOL HYGIENE EXHIBIT. The school hygiene exhibit consists of thirty panels 25 by 31.

CHILD WELFARE EXHIBIT. The child welfare exhibit consists of fifty panels, depicting almost every phase of child welfare, playgrounds, kindergartens and child training. These panels are profusely illustrated in colors and make a most attractive wall display.

PRENATAL CARE EXHIBIT. Twenty-six panels on the care of the expectant mother and the newborn. These panels are illustrated in colors and mounted on heavy cardboard. These are all sent by express, charges to be paid by organization sending request.

PUBLIC HEALTH CAR "WARREN."

The public health car "Warren" was assigned to the Division of Child Hygiene to aid in carrying out the program of the Children's Year. The special task of the car was to reach the individual child and his parents

and to give advice and assistance with personal health problems of children.

Dr. Blanche Hopkins was put in charge of the car. She personally examined as many children as the time and facilities permitted. Where children were found needing special immediate attention, their parents were asked to come to the car and the need explained to them. An average of fifty children a week who are underweight and needing medical, surgical or hospital attention have been reported to this office from the car.

The car "Warren" makes a special appeal to school children. By arrangement with the school authorities, all school children are brought by their teachers. A few from each class are weighed and measured and the height- and weight-taking are explained to the teacher and pupils. The higher grades are often required to write letters on the exhibit as a part of their work in English. The teachers and pupils are very glad to play this part of the game of public-health education.

The various exhibits on the car include food for children of all ages, clothing, care of teeth and mouth, apparatus for play, a book shelf, a sanitary drinking fountain and sewage disposal, model methods for the prevention of communicable diseases; in short, it contains practically everything which has to do with the protection of the health and the promotion of the well-being of infants and children.

One of the exhibits of special interest to mothers is the completely equipped infant-welfare station. Here the mother can weigh and measure her baby and have it scored by the attending physician. She can also see demonstrated all the equipment necessary for baby's comfort in the home.

The car started southwest on the Santa Fe in September and went to the Colorado border, returning the northern Santa Fe route. Each town receives posters and advertising material sent from this office. Personal letters are written to the mayor, the health officer and prominent citizens of each town visited by the car.

CRIPPLED, DEFECTIVE AND DEPENDENT CHILDREN.

Crippled children not under medical care number several thousand in Kansas, estimated by the returns on the house-to-house canvass. This number includes children suffering from such major physical ailments as spinal curvature, bone deformities, victims of infantile paralysis, and only such children as are in need of hospital care or its equivalent.

In addition to this number there are several thousand more children of so low-grade intelligence that they cannot be taught to advantage in the public schools, and who for their own sake, as well as for the sake of the children with whom their association is a degenerating influence, ought to be transferred to proper educational and custodial institutions.

TYPES OF CASES.

The following cases are taken from our records:

PHILLIPS COUNTY. "Your letter of the 18th received, and the inclosed blanks. I took my girl to our family physician to-day for an examination, and he says if she has curvature of the spine it is very slight. He says we ought to have her eyes straightened

first, and he thought the other trouble could be cleared up afterward if it did not disappear with the straightening of the eyes.

"I would prefer to have her treated at — hospital. Will you please take the matter up with the doctors as I do not know how to proceed?"

BOURBON COUNTY. "We certainly appreciate your communication in regard to our little daughter who has infantile paralysis, and will try to give you information about her as requested. She is now able to walk about the house and on level surfaces without the use of crutches, which she had used for about five years. Her affliction dates back to 1913.

"I would like just a word with you about the education of such children. We were very fortunate in learning of a school for such little girls as ours. But shame on Kansas if she has no thought for the bright little minds which dwell in little afflicted bodies. Could you not arouse interest and call attention to this much-needed branch of education, for surely it is more necessary to educate these little ones than normal children, if either must be neglected. Our little daughter can attend this school as long as we like, but it is out of Kansas; and then I am thinking of the large number of children in Kansas who are in need of such an institution. Again I say, Shame on Kansas!

"Our daughter was able to attend school here in our home town four years, but when her class met upstairs she could not climb the stairs. She is now doing sixth-grade work. Thank you again for the interest you have taken."

GREENWOOD COUNTY. "I am writing to know if you can give us some help in the case of our little boy three months old who was born blind. His father died fighting in France. I have three children under four years of age."

(Applications were filled out and this child was sent to the State Hospital at Rosedale for free treatment.)

BOURBON COUNTY. "Your letter of recent date received, and I have been talking with our doctors. They say they would like very much for an orthopedic surgeon to see the baby. My husband is a shop man and I can get transportation and could bring the baby to the hospital if you could make satisfactory arrangements to that effect. Then if the surgeon thought an operation necessary, we could arrange to have it done later. I hope to hear from you soon."

THE HEALTH OF THE SCHOOL CHILD.

One-third of the school children in Kansas are underweight for their height and age. About one-half of this number are 10 per cent or more underweight.

These figures are not guesswork estimates, but the result of actual weighing of school children in various parts of the state by competent people. The results obtained in Kansas compare with the results found in other states. Kansas is neither better nor worse in this respect.

The following letter reporting the weight test from one of the most prosperous cities of southwestern Kansas is published because it clearly illustrates the health conditions of school children of the state. It was written by a college-trained teacher of domestic science:

"I have found that over one-third of the children here are very much underweight. In every case, after taking the diet history and having asked other questions, I find exactly what is the cause of the trouble. So few of the younger children get milk, and practically no fruit and green vegetables. And oh! the greasy pancakes! Nearly three-fourths of these underweight children eat pancakes every morning, also hot biscuits and other hot breads. Nearly all of them have fried potatoes twice a day. I have tried to teach them that foods don't have to be fried, and how even fried foods may be made more digestible."

This condition of underweight of American school children has escaped attention so long because these underweight children when dressed may "look well." And because the child looked well the teacher and parent took it for granted that he was well. It was only when the child was put

on the scales that his real condition became apparent. The proper weight for his height and age is to the health of the boy and girl what the foundation is to the building. No matter how much is spent on the after-care of the building, if the foundation is not well laid the building will crumble and crack and its usefulness be destroyed long before its time. So it is with the boy and girl who is not properly nourished.

During the war Uncle Sam discovered that the reason so many of the men did not make good soldiers was because they had not been properly nourished when they were children. He doesn't want to be caught that way again. So the Bureau of Education, United States Department of the Interior, has issued an age, height and weight chart and explanatory literature for use in the school.

Education has laid great stress on fitting the child for life. It fails signally if it does not teach him how to live. Begin now in your school district. Ask your school board:

To put a pair of scales in every schoolhouse.

To require all school children to be weighed and measured regularly.

To organize food squads or hot lunches and feed every under-nourished child.

Parents, teachers and others who are especially interested in this problem may obtain literature on application to the Bureau of Education, Washington, D. C., or to the State Board of Health, Topeka, Kan.

CHILDREN AND MENTAL HYGIENE.

There is a higher average number of children born to the feeble-minded than to the normal mother. There is also a considerably higher rate of infant mortality in families in which the mother or the father, or both, are of a low rate of intelligence. Therefore, to carry out the purposes of the statute in creating the Division of Child Hygiene for the reduction of infant mortality, measures are necessary for the proper care of the feeble-minded, especially as it relates to the parenthood of large numbers of defective children with high morbidity and mortality rates.

At the joint request of the Board of Health and the Board of Administration, Governor Capper in 1918 appointed a Commission on Provision for the Feeble-minded, of which the director of the Division of Child Hygiene served as secretary. Owing to the war-time emergencies very few meetings could be held and much of the work which was outlined had to be foregone. The secretary prepared the annual report, "Kallikaks of Kansas." An edition of 15,000 copies was published by courtesy of Governor Allen, in January, 1919. There has been a great demand for this bulletin and at the end of six months the supply is almost exhausted.

Perhaps the greatest achievement of the commission was that it served to interest other state and national associations in what the state is doing. The National Mental Hygiene Association volunteered to send a psychiatrist as field worker to Kansas without expense to the state, provided the state established a mental-hygiene commission to coöperate with them. Governor Allen has appointed such a commission, composed of physicians and others interested in mental-hygiene problems.

As secretary of the Commission on Provision for the Feeble-minded, the director of the Division of Child Hygiene applied for and received reports from the United States War Department of the drafted men in Kansas rejected because of nervous and mental defects. The names and addresses of these men have been filed with the Kansas Mental Hygiene Association.

The reports of neuropsychiatric examinations, submitted to February 1, 1919, from the War Department, office of the Surgeon General, contained 942 cases for the state of Kansas, 50 of which were colored. This figure does not include the cases returned from the American expeditionary forces. The diagnoses of cases were distributed as follows:

Nervous disease and injury	285
Epilepsy	60
Psychoneuroses	163
Psychoses	90
Alcoholism	20
Drug addiction	26
Mental deficiency	202
Constitutional psychopathic state	96
Total	942

As Kansas does not have adequate facilities for caring for its mental defectives, hospitals for the insane, Penitentiary, reformatories and School for Feeble-minded all being filled beyond their working capacity, these 942 feeble-minded, insane, degenerates and incapables have been turned loose in their respective communities, to become loafers, paupers, tramps, to commit petty crimes or worse, and to spread disease. Perhaps what is most serious of all, many of them will marry girls of their own kind and will become the parents of diseased, deformed, feeble-minded and otherwise undesirable children.

The Division of Child Hygiene is held responsible for the reduction of the baby death rate and for the protection of the lives and health of young children. The responsibility rests upon the state of Kansas to assure only healthy babies being born and the kind that are worth saving.

CHILDREN'S LEGISLATION.

Legislation for children differs from that for adults. Child legislation must look to the preventive side of crime and not alone to the curative or to the punishment. To be successful it must throw such safeguards about the child, his home, school, parents, or guardians and his environment that crimes, or even offenses against the law, by children should be practically impossible. The state or environment which allows or permits a child to commit a crime should be held responsible rather than the child.

In another respect legislation protecting children should differ materially from that ordinarily enacted for adults. The law has not yet recognized that an eighteenth or a twenty-first birthday does not necessarily mean that the individual has reached that age of accountability. Some considerable portion of offenders against the law never reach the mental age of eighteen or twenty-one, or the status of accountability of an adult. Yet there is little or nothing to prevent these adults in body, but children in mind, from undertaking marriage and from bringing

into the world children whom they cannot endow with a good mind in a sound body, and for whom they are utterly incapable of caring properly. It is as though the average little girl or boy of nine or ten years should be intrusted with the bringing up of a baby or a houseful of children.

In Kansas laws relating to child welfare and to children—good, bad and indifferent—have been enacted from time to time without any special reference to each other or without any definite program for constituting a harmonious whole. Laws relating to civil and criminal affairs have been codified. There is a civil code and a criminal code. But the laws for children are scattered throughout the entire statutes, and many of them are ambiguous as to meaning and contradictory as to provisions.

Believing that Kansas should not overlook an opportunity for joining the most progressive states in bringing the laws for children up to the latest and best of modern standards, the Division of Child Hygiene was responsible for the appointment of an informal Children's Code Commission, which undertook a partial analysis of children's legislation in Kansas. A complete report of the Children's Code Commission is contained in the Handbook of Child Hygiene, *Bulletin* of the State Board of Health, August-September, 1918.

Based on this analysis, six bills were drawn and presented to the legislature. Of these, three were passed:

Senate bill No. 328: Act to license maternity hospitals and children's homes. This act outlines the requirements for any individual, firm or corporation wishing to care for maternity patients or boarding or caring for children for pay. It requires a license to be procured from the State Board of Health, and states the requirements for obtaining such a license. Penalties are provided for conducting a maternity or children's home without a license.

Senate bill No. 620 provides a commitment proceeding for feeble-minded similar to the present law for the commitment for the insane. This law provides for an examination by two physicians, or by one physician and one clinical psychiatrist, on whose recommendation the probate judge can commit a feeble-minded person to guardianship or send him to the State School at Winfield.

Senate bill No. 327 changed the name of the Winfield institution from the State Home for the Feeble-minded to the State Training School.

The three bills that failed to pass are as follows:

House bill No. 412 provides for proceedings to establish paternity of children born out of wedlock and shifts the responsibility from the girl mother to the state. Provides that the child born out of wedlock shall have the same rights and privileges of children born in wedlock, and the parents are responsible for their maintenance, care and education in the same manner as the parents of children born in lawful wedlock.

House bill No. 409: This bill provides that school-district boards and boards of education may expend school funds for the employment of school physicians, nurses, dentists and for the correction of health defects. At the present time school boards hiring nurses are obliged

to employ them as teachers of hygiene, there being no provision under the law for the employment of school nurses.

Senate bill No. 396: This bill was intended to remove the existing inconsistency and conflict between the present child-labor laws and the compulsory-school-attendance laws. The subject is covered in an opinion by the attorney-general on May 28, 1916.

The work of the 1919 session Children's Code Committee hardly made more than a beginning of what needs to be done for children's legislation in Kansas. It is urged that the work be continued until the laws for children in Kansas are rewritten and revised so as to provide a workable children's code which guarantees to every child in Kansas his full rights and privileges and will so safeguard him that he may grow up into a useful citizen.

FINANCE.

Appropriation for year ending July 1, 1918.....	\$7,500.00
Salaries, office and public-health car "Warren".....	\$5,906.02
Traveling expenses, staff and car "Warren".....	508.68
Express, drayage and postage	267.16
Supplies, repairs and equipment	768.85
Special Children's Year work	54.29
	<hr/> 7,500.00

The Division of Child Hygiene is charged with the protection of the health and lives of young children. Besides this, every problem having to do with children, whatever the nature of it, in the absence of any specifically constituted authority, comes to the Division of Child Hygiene. The director of the Division of Child Hygiene is truly like "the old woman who lived in a shoe; she had so many children she didn't know what to do." And it is with a sense of the pitiful inadequacy of the provisions for protecting the health and the lives of children that this report is proffered.

LYDIA ALLEN DEVILBISS, *Director.*

Fifth Annual Report of the Chief of the Division of Child Hygiene.

TOPEKA, KAN., July 1, 1920.

Dr. S. J. Crumbine, Secretary State Board of Health:

SIR—I herewith transmit to you an account of the activities of the Division of Child Hygiene for the fiscal year July 1, 1919, to June 30, 1920.

For nine months of the fiscal year the chief of the division had no staff other than one clerk and one stenographer. The work of inspecting institutions, as required by the legislature of 1919, consumed a considerable unit of time and money.

It seemed a hopeless task to think of trying single-handed to impress conditions affecting the health and lives of half a million children distributed over the 105 large counties of our state.

Lacking a staff and hampered by want of funds, the only recourse was an appeal to the people of the state. The coöperation extended and the actual work accomplished has been a constant delight and a never-ending surprise.

A superior quality of leadership has arisen to meet the needs of the state plan. A large number of men and women, representing the highest type of citizenship of the state, have given unstintingly of their time and thought. The result is a program which has already justified itself and which is beginning to attract attention as another demonstration of the constructive team work for which Kansas is famous.

A plan has been evolved big enough for every friend of Kansas childhood to share to the limit of capacity and interest, and democratic enough to enlist and use the talent of varied groups and individuals. This volunteer effort has been magnificent, but it has grown to a size that demands centralized administration beyond the capacity of any existing agency.

The Child Hygiene Division of the Kansas State Board of Health was the second to be established of the thirty-five such divisions now operating in as many states. It has to-day one of the smallest appropriations of any of the thirty-five. The little state of New Jersey has this year given its division of child hygiene an appropriation of \$125,000. Other states of less wealth and no greater need are using double and quadruple the money at present available for this purpose in Kansas.

The chief of the Division of Child Hygiene respectfully asks your approval of the following modest budget for the ensuing biennial period:

Salary of chief	\$8,500	
Salary of assistant chief	2,500	
Salary of inspector of children's institutions	2,500	
Salary of specialist for crippled children	2,000	
Salary of two stenographers	8,000	
Salary of one clerk	1,000	
Salary of one statistical clerk	1,200	
Traveling expenses for four	4,000	
Incidentals, educational films, equipment, etc.	1,800	
Purchase and equipment of "healthmobile"	4,000	
		<hr/>
		\$25,000
Appropriation for car "Warren":		
Physician	\$2,500	
Nurse	1,500	
Dietitian	1,500	
Maid	500	
Maintenance	4,000	
		<hr/>
		\$10,000
Total		<hr/>
		\$35,000

With the above budget it will become possible to give adequate attention to writing educational bulletins, carrying on correspondence courses, conferring with the many groups and individuals who come to headquarters to discuss the state work, and maintain central control at the office, and at the same time carry educational work to communities through lectures, conferences and visits. It will be possible to maintain constructive supervision of children's homes and maternity homes and find many of the stranded children of the state. It will become possible, through the nurse specialist, to gather into clinics the large crop of infantile paralysis cripples left from the 1914 and 1916 epidemics and give them treatment before it becomes entirely too late to help them. It will become possible to carry intensive health education to communities through the powerful combination of exhibit, conference and examination on the health car and "healthmobile."

The great state of Kansas in this, its period of reconstruction, and in its year of greatest material prosperity, cannot do less than give its children this modicum of protection.

ACTIVITIES OF THE DIVISION OF CHILD HYGIENE.

The activities of the Division of Child Hygiene during the current year may be said to have fallen into four general lines—administration, education, legislation, and research.

I. ADMINISTRATION.

The session of 1919 passed a law requiring the Division of Child Hygiene of the State Board of Health "to inspect or cause to be inspected, at least once each six months, every maternity hospital or home, or home for infants or children," and also requiring that every person, association or agency caring for one or more infants or children under sixteen not related by blood or adoption, or one or more pregnant women not related by blood or marriage, shall be licensed by the State Board of Health, but only after inspection and favorable report by the Division of Child Hygiene.

No funds were appropriated for the expense of making these inspections or for providing the Division of Child Hygiene with extra help for this purpose. Even the license fees are turned into the state treasury. The Division of Child Hygiene has made 115 inspections of 63 public and private homes where infants, children or pregnant women were being kept. This has been a serious drain upon the time and budget of the Division.

CHILDREN'S HOMES. This inspection has been particularly difficult and time-consuming because of the conditions existing in the state with reference to the care of dependent children. There is one state orphanage which takes care of a maximum of 200 children. Thirty-three children's homes were found scattered over the state, operated by various agencies, with an average population of approximately 1,000 children. Twenty-five private homes have been discovered to be boarding children not related by blood or adoption. There are doubtless hundreds of these, if the state had any means of locating them.

Practically none of the institution homes were found to come up to the standards set by the inspection law, but the majority readily complied with the minimum requirements. Several remained indifferent or antagonistic, and at the end of the year (June 30, 1920) six institutions still remain on probation. It has been impossible to enforce a closing order on recalcitrant institutions, because there was absolutely no means of disposing of the children in residence. These six homes will, with two possible exceptions, qualify for issue of license July 1, 1920. The forcing of these institutions up to even a minimum standard has been a slow and difficult procedure. Almost all are cramped for funds and are feeling the pressure of the high cost of living. There is a general inclination on the part of most boards and agencies to regard standards far below that of satisfactory family life as good enough for dependent children, and the stock excuse for deficiencies is, "It is better than most of them came

from." There is a serious lack of suitable women to place in personal charge of these homes. To take just care of a large number of other people's children requires a wisdom, tact and intelligence above the average. Some of the homes have been fortunate enough to be able to command this kind of service at a low price. Too often, however, only an inferior woman can be induced to accept the low wages and trying conditions involved.

The executive boards of these homes are made up of well-meaning people of high community standing and philanthropic motives, but often lacking in knowledge of institutional management, child psychology, either of the individual child or children *en masse*, and of the principles of child feeding and child development. Moreover, these boards are made up of busy people who cannot and do not give enough individual attention to the management of these homes to even know in detail how they are conducted.

This system of caring for dependent children has developed out of the very praiseworthy attempt of groups of people to meet a pressing problem as exhibited in their midst. The whole method is wrong, however, and can never be made satisfactory.

All students of childhood in any of its phases of development agree that the mass care of children can never be made ideal, any more than plants in hedgerows can reach maximum individual growth. The whole trend of modern scientific care of children is away from the institution and toward normal family life.

Instead of building more institutions which at their best are necessarily places of incarceration and repression, and at their worst are destroyers of individuality and happiness, we should be building up a system of skilled placing of these children in approved homes with continued supervision until majority.

There are two private agencies in the state which are placing and supervising children through their systems of district superintendents. These two agencies have in a great measure solved the foundling problem for Kansas, and the state is greatly indebted to them. All agencies handling dependent children, however, are legally empowered to dispose of them by adoption, indenture or otherwise, and all of them do so. There is always the strongest possibility that an older child who is not adopted is taken for purposes of exploitation. Not only humanity and justice, but the safeguarding of our future citizenship, demands that responsible, skillful and sufficient supervision be given all dependent children. To herd a child in unwholesome contact with many other children and forcibly subject him to physical and moral contamination, together with stultifying repression, often coupled with underfeeding and other abuses, is bad enough. To take him out and lose him in a family where he does not fit, and where he does not have even the protection of semipublicity or a well-meaning, if inefficient, board of directors, is to make of a defenseless child and a future citizen of the state, the most unhappy, the most unprotected, and in some instances the most inhumanly treated living thing in the state. At the most conservative estimate, there are 5,000 children in Kansas living in foster homes without efficient, and

chiefly without any, supervision. There is no more imperative subject before the state for constructive legislation than this subject of the care of dependent children.

MATERNITY HOMES. One mission home was refused license because it was also keeping dependent children, contrary to the text of the inspection law. It was also insanitary and without equipment. One colored Crittenton mission was refused license and closed because of existing conditions. This board, however, has acquired a satisfactory property and reorganized its methods preparatory to obtaining a license for the ensuing year.

One white Crittenton mission conducts a high-class institution and keeps mothers and babies in residence and training for six months after birth of the child. Unfortunately there are relatively very few girls needing this service who are willing to meet the requirements of this excellent institution.

One small mission home in a small town is prepared to give friendly care and home surroundings to this class of girls, but thus far only two or three have come to them.

One church rescue home in one of the larger cities takes care of the largest number of cases of any one agency in the state, averaging from eight to twelve in residence. The equipment and support of this home is meager in the extreme.

These three institutions, with one private home where one to three unfortunate girls are boarded, have been licensed; two have been refused license and closed, and one home of doubtful reputation was reported to the county attorney.

There are a number of incorporated hospitals which do not come under the provisions of this law, which have lying-in service. Several of these take dependent cases.

The session of 1911 passed a law permitting counties to send indigent women to the University Hospital at Rosedale for confinement. Very few have been so sent, although a good many cases take advantage of the free clinic service.

There is a great need of provision for approved detention care of these cases while waiting to go to the hospital. A detention home in connection with the maternity clinic at the State University Hospital would not only materially increase the value of this clinic to the medical school, but would discharge an important and urgent social duty of the state.

The survey of conditions affecting the welfare of children in two cities and one county shows a total of twenty-seven cases of illegitimate birth known to have occurred to local residents of these counties between April 1, 1919, and April 1, 1920. At this ratio, according to the population of these cities and counties, there would have been about 500 cases in the state during the same period of time. A total of 322 illegitimate births were reported to the Division of Vital Statistics for the calendar year of 1919. All of these may not have been residents of the state, and it is certain that many unfortunate Kansas girls went out of the state for care. The state of Kansas does not afford sufficient accommodations, either public or private, for its own unfortunate girls.

RECORDS. After making the first round of inspections and getting a perspective of the problem, the chief of the Division of Child Hygiene drafted a set of record forms as authorized in section 7 of the inspection law. These were officially approved by the State Board of Health and submitted to the various institutions January 1, 1920. These record blanks consist of an admission card, discharge card, sickness report card, a weight card, physical examination card, menu book, and a tabulation sheet. Monthly duplicate reports are sent to the Division of Child Hygiene.

These records are designed to supplement the very meager acquaintance which it is possible to obtain in two visits a year. It is taking time and effort to accomplish the satisfactory keeping of these records, but one by one the homes are learning to keep these with interest, and the showings are already significant and valuable.

Some Inspections.

INSTITUTION NO. 1. A mission was found to be caring for the refuse of the police court, the probate court, the associated charities, the poor commissioners and every other social and antisocial agency in one of the larger cities of the state. Under conditions of unspeakable filth, vermin, crowding and neglect, this group of religious devotees were giving the best care they could give, under existing conditions, to foundlings, orphans, aged derelicts, feeble-minded, and pregnant girls. The two latter classes of inmates took a large part of the personal care of the children. It was being used as a social dumping ground, but no help of any kind was proffered them by the community. Even the Thanksgiving school offerings went to a well-supported, high-class orphanage, which would not contaminate its premises with the class of children which fell to the care of the first-named home.

If there had been any possible way of disposing of the twenty-six children found in residence, a license would have been promptly refused. As there was not an individual or an agency in this city which would come to the rescue of these children, it was necessary to place this home on probation and try to force it up to license standards. The home was required to dispose of its aged, feeble-minded and pregnant inmates. It was required to make a playground in the front yard instead of the barnyard, and to purchase beds enough that each child might have a bed, instead of three children sleeping in one small crib, as they were doing at the time of the first inspection.

The third floor, which was a veritable fire trap, was provided with approved fire escapes and extinguishers and a hospital room equipped for isolation of illness. The entire place was cleaned up and made free from vermin. The basement was cleaned and modern laundry equipment installed in an adjacent building. This home made herculean efforts to come up to the requirements imposed by the law and the inspector, to such effect that a license was most cordially issued to them in March. The accomplishment of this home is a rebuke to the social intelligence of a community which permits a few private individuals to bear the burden of caring for its most dependent, most helpless and most needy unit of population.

INSTITUTION No. 2. A children's home supported by a fraternal order, with not only generous but lavish funds behind it, was found in as deplorable a sanitary condition as any of the worst in the state. In one dormitory twenty-three boys wiped from one roller towel, combed with a piece of comb chained to the wall, and drank from a battered cup chained to a lavatory faucet. No night clothing was provided, and bed-wetting children threw their top covers over the foot of the bed in the morning, but did not lift the sheets from the mattresses. No rubber sheets were used and the expensive mattresses were never dry. Several had literally rotted to pieces. Only one sheet was provided for each bed, and this was changed no oftener for the dozen or more bed-wetters than for the rest. This condition existed because of lack both of standards and knowledge of institutional management on the part of the officary of the institution. Because of the cumbersome machinery of administration, it has been impossible to secure attention to the demands of the inspector, and this place was still unlicensed June 30, 1920. There is some indication, however, that the board intends to bring the place up to standard in the near future. This is an example of what conditions can exist where there is no lack of funds and where the extensive and authoritative organization back of the home desires to have it conducted on the highest possible plane.

INSTITUTION No. 3. A colored children's home was found housed in a dilapidated frame house across the street from a large, expensive modern church. The pastor of the church was on the board of directors, which included other influential members of the community.

Twenty colored children, both boys and girls, were found in residence, all using one insanitary toilet in the yard and sleeping on filthy beds which were reeking with vermin. They never saw milk, received only two meager meals per day, and stood to eat these. The inspector labored faithfully for the entire year and made many trips and inspections. No real improvement was made, and when the president of the board went to live in the home and the conditions were found to be worse than ever, the limit of endurance was reached and closing orders were issued. What is to become of the dependent colored children of this large community is a problem which seems to give the community itself little concern.

There is the greatest need of a full-time inspector with an adequate traveling fund if the conditions under which dependent children and dependent pregnant women live are to be materially improved.

II. EDUCATION.

1. **CORRESPONDENCE.** One thousand, five hundred, seventy-two letters have been dictated in the course of the activity of the division, many of these in response to requests from mothers for advice as to care of children; many from teachers and school authorities asking for suggestions for teaching hygiene, making physical examinations, etc. Many letters came from club women, asking what they might do to further the cause of child welfare in Kansas, also letters from health officers, probate judges, dentists and public-health nurses. Many letters have come from

outside the state, some from outside the United States, asking for an exchange of ideas and an account of the activities of the division.

2. **CORRESPONDENCE COURSE.** The mothers' confidential registry, established by the previous chief of the division, has served 275 expectant mothers during the year. It is the purpose of the director to expand this excellent course, which has served 2,572 women since its start, into a simple correspondence course which may be taken by any woman in the state, whether she is actually pregnant or not.

3. **LITERATURE.** The present printing stringency has seriously limited the service of the division in the matter of distributing literature. The 5,000 copies of the Kansas Mothers' Book on hand at the first of the year lasted but a few months. The division has distributed all the Federal literature which it was possible to obtain. In all 20,890 pieces of educational literature have been distributed. No new educational literature has been published by the division. As it is no longer possible to get government literature in quantities, and as the demand for instructional literature for mothers grows with the increase in numbers and activity of public-health nurses, it is imperative that this need be met in the very near future. It has been impossible recently to fill in full the very important demands. The division has supplemented this shortage in printing by getting out many thousand sheets of mimeographed material. This has included a club study program in child welfare, work sheets for the survey, news letters, etc.

4. **EDUCATIONAL FILMS, CHARTS AND EXHIBITS.** The division has acquired two important films, which have since been in constant circulation. One is "Our Children," issued by the Federal Children's Bureau; the other, "An Equal Chance," issued by the National Public Health Nursing Association. These are sent out on request for expense of transportation only. The chart exhibits are still in great demand, and Miss Efficiency, the traveling infant doll, continues to be as popular as ever.

5. **LECTURES AND CONFERENCES.** The chief of the division has been unable to accept anything like all of the requests which have come for her personal assistance as speaker, children's examiner at health conferences, etc. She has managed to meet an average of about one appointment per week.

It is highly desirable that an assistant chief be added to the division in order that this most important phase of educational extension work may be met without demoralizing the office routine and other constructive activities of the division. It is out of the question for one individual to give the local coöperation to clubs, health officers, public-health nurses and schools which would so greatly strengthen mutual endeavor, and at the same time carry on the other varied activities of the division.

6. **THE HEALTH CAR.** The health exhibit car "Warren" made its fourth yearly itinerary under the direction of the Division of Child Hygiene. The appropriation of \$3,000 was used as far as it would go, and supplemented from the scanty funds of the Child Hygiene Division. At this, the increased cost of maintenance made it possible to keep the car

out for a total of five months only, where formerly it stayed on the road for ten months. It stopped at some forty towns, staying from three to seven days in each. A woman physician, Dr. Caroline Carr, was in charge of the car, with one helper and a maid.

The exhibit, which was badly in need of overhauling, was reconstructed while the car was in during the winter. It is the present effort to have it tell the complete health story from a constructive, positive aspect rather than emphasize disease. The car has carried a vital health message to the communities which it has visited. By previous arrangement, forenoons were reserved for school children, who were brought in relays by their teachers. The exhibit was explained, and most of the children were weighed and measured, and, as far as time permitted, given teeth and throat inspection. Practically every school child in some forty towns was thus reached with intensive health instruction. The enthusiasm with which they absorbed the message was shown in their attitude and by the very remarkable set of written reports from the children themselves, which are in the hands of the division. The afternoons were reserved for adults and mothers with young children.

The service of the car could be materially extended by an increased maintenance fund which would make it possible to keep the car on the road at least nine months of the year, and by the addition of another member to the staff, which would enable the physician to spend her time making physical examinations of children while two assistants explain the exhibit. This would also make it possible to enter into the health problems of the community in greater degree than is at present possible, and add much to the already great value of this educational project.

A healthmobile. It is the desire of the Division of Child Hygiene to equip a "big grey truck," such as an army truck, to perform a service similar to that of the health car, and send it into the stretches of the western parts of the state which are inaccessible to railroads and where there is an utter absence of health teaching and extremely limited medical and nursing service. The "healthmobile" is being used by the Children's Bureau and several state health departments and has demonstrated its practical value.

7. KANSAS FREE FAIR PLAYGROUND. The Division of Child Hygiene equipped a playground at the Kansas free fair, September 13 to 19, 1919. The playground was operated by the Topeka Day Nursery Association, assisted by the kindergarten and playground teachers of the city. The playground was designed primarily to care for small children while their parents visited the fair. The chief took advantage of this opportunity to demonstrate simple playground equipment, each piece of which was designed to develop the most unused parts of the child's body and have a correctional and constructive value. It is all permanent construction and of a character which can be duplicated in the back yard of any home.

III. LEGISLATION.

The chief of the Division of Child Hygiene, in October, 1919, asked Governor Allen to appoint a committee to draft a plan for a Children's Code Commission, and he accordingly officially appointed Judge Ralph Gaw, of the Shawnee county juvenile court; Judge John Egan, assistant

attorney-general; Mrs. Festus Foster, chairman of the child welfare committee of the State Federation of Women's Clubs; Miss Alice K. McFarland, deputy state factory inspector, and Dr. Florence Brown Sherbon, chief of the Division of Child Hygiene.

The problem confronting this commission was the very difficult one of devising a method of getting the work done without funds. The plan as finally drafted provided for seven localized drafting committees, with seven corresponding advisory committees. The drafting committees of the commission, as appointed by Governor Allen, stand as follows:

Code Commission: Chairman, Judge Ralph H. Gaw, Topeka; secretary, Dr. Florence Brown Sherbon, State Board of Health, Topeka; treasurer, Carroll B. Merriam, Central National Bank Building, Topeka.

Kansas Women's Committee on Child Welfare: Chairman, Mrs. Festus Foster, Topeka; secretary, Dr. Florence Brown Sherbon, State Board of Health, Topeka.

Director of Survey: Dr. Alice Conger Hunter, State Board of Health, Topeka.

Executive Committee, Code Commission: Judge Ralph H. Gaw, Topeka; Mrs. Festus Foster, Topeka; Wilbur N. Mason, Topeka; Alice McFarland, Topeka; Judge John G. Egan, Topeka; Dr. Florence Brown Sherbon, Topeka.

Children in Industry: Alice K. McFarland, chairman, State Labor Commission, Topeka; Prof. M. E. Pearson, superintendent city schools, Kansas City; Harriet Parks Kirby, attorney, Kansas City.

Education: Mrs. George Barker, chairman, Lawrence; Dean F. E. Kelley, Kansas University, Lawrence; Prof. A. J. Harno, Kansas University, Lawrence.

Health of Children: Dr. B. Belle Little, chairman, Manhattan; Mrs. Buena Burr, Manhattan; Ambrose Johnson, attorney, Manhattan.

Protection of Maternity: Mrs. D. V. Walker, chairman, Wichita; Mrs. Austin M. Cowan, Wichita; Hon. Ben F. Hegler, attorney, Wichita.

Protection of Adolescence: Mrs. J. R. Wilkie, chairman, Emporia; A. H. Guffler, Emporia; R. H. Hamer, attorney, Emporia.

Defective, Dependent and Delinquent Children: Wilbur N. Mason, chairman, Topeka; Dr. Florence Brown Sherbon, Topeka; Judge Ralph H. Gaw, Topeka.

General Interests of Children: Dr. S. J. Crumbine, chairman, Topeka; Mrs. Frank Chase, Topeka; Hon. E. D. McKeever, attorney, Topeka.

Joint Finance Committee: Geo. A. Guild, Topeka; A. A. Hyde, Wichita; J. P. Slaughter, Topeka; Mrs. Lillian Mitchner, Topeka; Mrs. C. I. Martin, Topeka; Mrs. Walter Burr, Manhattan.

The drafting committees are hard at work and have already submitted preliminary outlines of their proposed programs, which are of a character promising substantial results before the meeting of the 1921 legislature.

It will be impossible in the limited time, and with no funds, to do more than draft an architect's plan which will insure that future legislation will be logical and consecutive, and fit a few important sections into place. It is to be hoped that the commission will be continued by legislative enactment and authorized to return a complete report in 1923.

IV. RESEARCH.

1. **FREE DENTAL INSPECTION RECORDS.** The Division of Child Hygiene coöperated with the State Board of Health and the executive council of the State Dental Association in the formulation of records and instructions for use in making the free dental inspection required by the legislature of 1919. This included certain items of physical inspection which

are necessary to an understanding of oral conditions, and were so formulated that they may be observed and recorded by the teacher.

Tangible evidence of the interest of teachers in the health of children and of their willingness to coöperate in health activities is furnished by the examination records of some 40,000 school children, representing the work of some 3,000 teachers, which now await tabulation in the Child Hygiene Division office. A unit of 10,000 was selected for tabulation, and every odd moment has been spent on these, but the limited office force does not permit the compilation of statistics on this and other subjects from the mass of valuable information in the office. It will take some time to complete even this unit of tabulation, but it is hoped it will be done in time for use by the Code Commission committee on health of children.

Two small practice units, totaling 2,312 children, were completed, showing the following results:

	Number.	Percent.
Children more than 10 percent underweight	429	18.5
Children reported by teachers as having eye defects.....	465	20.1
Children reported by teachers as having defective hearing.....	222	9.6
Children reported by teachers as mouth breathers.....	327	14.1
Children reported by teachers as having pain in joints or muscles (usually the result of diseased tonsils or teeth).....	171	7.8
Children reported by teachers as getting out of breath easily (which may also be a symptom of trouble from tonsils or teeth).....	370	16.0
Children reported by teachers as getting tired easily.....	352	15.2
Children reported by teachers as having headache often	334	14.4
Children reported by teachers as having headache seldom or occasionally,	1,214	52.5
Children reported by teachers as having headache worse in evening (often a symptom of eye strain)	386	16.6
Children reported by teachers as poorly developed	240	10.3
Children reported by teachers as failing in grades.....	217	9.3
Children reported by teachers as dull.....	292	12.5

DENTAL CONDITIONS AS REPORTED BY DENTAL EXAMINERS.

Abscesses	487
Cavities in temporary teeth	2,729
Cavities in permanent teeth	2,562
Malocclusion	451
Toothache, never	972
Toothache, seldom or occasionally	652
Toothache, often	152
Use toothbrush regularly	677
Use toothbrush occasionally	1,132
Use toothbrush never	338

Several things are suggested by these figures which point to a condition of serious physical impairment.

First: Teachers and school officials are awakening to the fundamental importance of the health of the child and to the opportunity and responsibility of the school in relation to this.

Second: It is high time a study were made of the present physical condition of our next generation of citizens. This is a matter of state conservation of prime and fundamental importance.

Third: There is the greatest need in Kansas of an up-to-date physical-inspection law which shall include dental inspection as one of its items.

Fourth: There is the greatest need of free dental service to provide correction of dental defects for those children whose parents cannot or will not care for their children through the regular channels.

2. THE KANSAS WOMEN'S COMMITTEE ON CHILD WELFARE. The chief of the Division of Child Hygiene, after reading letters from various

women's organizations asking for suggestions as to child-welfare work, asked each of the state women's organizations interested in social welfare and child welfare to appoint a representative to act on a central committee. Thirteen organizations are represented on this committee, together with six women representing special interests of children. The personnel of this committee as organized is as follows:

State Federation of Women's Clubs, Mrs. Festus Foster, Topeka (chairman).
 State W. C. T. U., Mrs. Lillian Mitchner, Topeka.
 State Mother's Congress and Parent-Teacher Association, Mrs. J. K. Coddington, Lansing.
 State Collegiate Alumnae, Mrs. Frank Chase, Topeka.
 State D. A. R., Mrs. D. V. Walker, Wichita.
 State Women Voters' League, Mrs. Catherine A. H. Hoffman, Enterprise (deceased).
 State Women's Bar Association, Mrs. Homer Foltz, Topeka.
 State P. E. O., Mrs. Alva Clapp, Pratt.
 State Public Health Nursing Association, Mrs. Virginia K. Kimble, Topeka.
 State Public Health Nurses, A. R. C., Miss Laura Neiswanger, Topeka.
 State Kindergarten Association, Mrs. June Chapman, Topeka.
 Kansas Council of Women, Miss Effie Graham, Topeka.
 State Superintendent of Public Instruction, Miss Lorraine E. Wooster, Topeka.
 Secretary State Industrial Welfare Commission, Miss Linna Bresette, Topeka.
 Woman Factory Inspector, Miss Alice McFarland, Topeka.
 Chief, Division of Child Hygiene, Kansas State Board of Health, Dr. Florence Brown Sherbon, Topeka (Secretary).
 Rural Extension, Home Economics, K. S. A. C., Mrs. Mary W. McFarlane, Manhattan.
 Rural Extension, Home Demonstration Agents, K. S. A. C., Miss Frances Brown, Manhattan.
 State Federation of Colored Women's Clubs, Mrs. Emma Gains, Topeka.

DISTRICT CHAIRMEN.

First District, Mrs. W. P. Lambertson, Fairview.
 Second District, Mrs. Roy Tenney, Lawrence.
 Third District, Mrs. R. R. Bittman, Independence.
 Fourth District, Mrs. C. L. Bruner, Burns.
 Fifth District, Mrs. C. A. Kimball, Manhattan.
 Sixth District, Mrs. C. B. Walker, Norton.
 Seventh District, Mrs. Mamie Axline Fay, Pratt.
 Eighth District, Mrs. Ben Grattan, Sedgwick.

This committee decided to attempt a comprehensive piece of amateur research—nothing less, indeed, than a state-wide survey of conditions affecting the welfare of children.

The plan was perfected and published in the *State Board of Health Bulletin* of February, 1920. By June 30, 1920, fifty-two counties were organized for making the survey, and Riley county had completed the survey in brilliant fashion, supplying just the necessary tangible evidence that the scheme is practical and that the results are worth while. Hot weather, harvests and vacations halted activities until fall, but it is hoped and expected that many counties will then complete their effort.

This survey is designed to cover the fields of child interest outlined in the international "minimum standards of child welfare," which are, in turn, the subjects under consideration by the Code Commission.

The several objectives of the survey may be said to be:

(1) Furnish information to the Code Commission as to existing conditions and indicate necessary and desirable legislation.

(2) Induce communities to study their own conditions and map out organic follow-up programs.

(3) Introduce the element of team work into the very real and universal interest on the part of the citizens of the state in the children of Kansas.

The Division of Child Hygiene on May 1 employed Dr. Alice Hunter to assist in the organization of the survey and the Code Commission. Her services have been invaluable, but the funds of the division will not permit of continuing her services, although it is inconceivable how these activities can be adequately cared for by the chief without assistance. Mrs. Walter Burr, chairman of the Riley county survey, was also employed for a few weeks as field director, but the funds of the division did not permit of continuing her splendid work.

DIETETIC INVESTIGATIONS. At the request of the newly appointed superintendent of the State Training School for Feeble-minded, at Winfield, the head of the department of home economics of the Kansas University and the chief-elect of the Division of Child Hygiene, in June, 1919, visited the school and made an analysis of the dietary and weighed and measured the inmates of the institution.

Recommendations were made as to changes in diet and a monthly weighing advised as a check. At the end of the year, in June, 1920, the results were reviewed and another dietetic analysis made. It was found that the condition of the inmates of the institution had materially improved as a consequence of improved feeding.

At the invitation of Supt. Leo Harrison, of the State School of the Blind, a similar study was made in June, 1920, with a very favorable showing for the school.

In June, 1920, Dr. Caroline Carr was sent to the State Industrial School, at Beloit, and a standard physical examination made of the girls in residence. This is to be followed up by a dietetic study. It is felt by everyone concerned that an extension of this study to each of the state institutions caring for children is very much worth while. As far as known, this is the first time an attempt has been made to correlate the feeding and physical condition of a considerable number of institutional children. It is believed that the final report may prove to be a substantial contribution to the literature on institutional management.

Prof. Elizabeth Sprague has further contributed to this field of research by donating the time of instructors and graduate students in making dietetic analyses of four private orphans' homes. The results of these studies, together with the physical-examination reports, now await correlation and study. In one instance the investigation revealed a very defective dietary and a number of cases of incipient pellagra, which promptly cleared up on correction of the diet.

FURTHER RESEARCH. The chief of the division feels impelled to speak of the importance of taking advantage of this spirit of coöperation on the part of the scientific groups of the state. There is no doubt but that the method here illustrated might be extended to include the various interests of the child, both the child wards of the state and the all-important, average, so-called normal child.

The state should maintain a scientific clearing-house for the study of any child who becomes a ward of the state because of atypical conditions residing in himself or his environment. In this way only may each child receive his rightful opportunity for realizing the best that is in him, and in this way only can the state salvage creditable citizenship to itself and handle this important business in an efficient manner.

The state should further maintain a station for scientific research concerning the development and mental, moral and physical welfare of its normal children, who are the backbone of its future citizenship. The benefits resulting from the orderly arrangement of existing knowledge and the extension of this by scientific investigation has been fully demonstrated in agricultural, animal husbandry and every other interest of human life. It remained for the Iowa legislature in 1916 to establish a station for scientific research in child life.

Kansas cannot wish to lag behind. Indeed, Kansas should build upon the Iowa idea and establish a bureau for research into the fundamental relationships of family life which produce the child and in a large measure make him what he is.

Kansas should build upon her solid foundation of economic prosperity and social advancement a magnificent superstructure of young citizenship—a citizenship sound in the enduring qualities of mental, moral and physical excellence.

INFANT MORTALITY.

The following items were taken from the records of the Division of Vital Statistics:

	1919.	1918.	1917.
Live births registered	37,147	39,696	38,611
Stillbirths reported	1,254	1,378	1,208
Total deaths under one year.....	2,546	3,118	3,005
Rate of infant mortality per 100 live births....	6.85%	7.9%	7.7%
Causes of infant deaths:			
Diarrhoea and enteritis	309	402	558
Miscellaneous causes, including contagions,	926	1,165	928
	1,235	1,567	1,486
Diseases and conditions of early infancy:			
Congenital malformities	244	292	244
Premature birth	631	716	699
Congenital debility	270	358	441
Other diseases of early infancy.....	166	185	135
	1,311	1,551	1,519
Stillbirths	1,254	1,378	1,208
	2,565	2,929	2,722
Ratio of birth mortality to total infant mortality	51%	49%	50.5%

These figures show several interesting things. First, that the infant mortality rate for the year 1919 is the lowest ever reached by Kansas and is one of the lowest to be reached by any state.

The decrease in deaths from gastrointestinal disorders testifies to increased intelligence on the part of mothers as to infant feeding. One cause of infant loss alone remains unaffected, or rather shows a relative increase, and this is the loss of infants from causes operative at birth or prior to birth. It is appalling to think that of the 2,546 babies who died

before reaching one year of age, 1,311, or 51 per cent died at birth. If we add to this the 1,254 stillbirths, we have the astounding figure of 2,565 infants who never had a fighting chance to live. In addition to these accusing figures, we have a corresponding standstill in our maternal mortality rate, which was as follows for the corresponding years:

	1919.	1918.	1917.
Total deaths of mothers at childbirth.....	248	307	259
Rate per 1,000 live births.....	6.7%	*7.7%	6.7%

These statistics show us that the mass problem of our infant mortality remains untouched. We must provide the mothers of the state with better care before birth and at birth, and also instruct them as to the fundamental factors in successful childbearing in order that they may intelligently direct their own lives during this important period. It is the purpose of the Division of Child Hygiene to direct educational effort and propaganda intensively upon this subject for the ensuing biennial period.

FLORENCE BROWN SHERBON.

* Influenza a factor.

DIVISION OF VENEREAL DISEASE.

ORGANIZATION OF VENEREAL DISEASE WORK IN KANSAS.

When the medical officer detailed by the Surgeon General reached Kansas in May, 1918, to take up venereal-disease prevention work under the supervision of the secretary of the State Board of Health, the foundation had already been carefully laid for carrying on such work in a thoroughgoing manner. Regulations requiring the reporting of venereal diseases had been enacted in June, 1917. In fact, the first regulations requiring notification had been adopted about three years earlier. They were reenacted in June, 1917, under specific authority granted by chapter 205, Session Laws of 1917.

The extra cantonment zones had been created for health supervision in September, 1917, and on November 2, 1917, regulations were enacted by the State Board of Health authorizing quarantining persons found within these zones suffering with venereal disease. In March, 1918, quarantine regulations had been extended so as to apply to all parts of the state, and all health officers within the state were authorized to quarantine persons for venereal diseases. In addition to enacting regulations providing for quarantine of infected persons, arrangements had been made with the State Board of Administration to maintain infected women in quarantine at the State Industrial Farm for women.

Realizing the importance of disseminating information concerning such diseases, a general educational campaign had been launched by a committee working in coöperation with the State Council of National Defense and the State Board of Health, and the publicity gained for the movement had resulted in arousing considerable interest in the problem.

The principal undertaking for the summer of 1918 was visiting the larger cities in the state, which included practically all having 5,000 population or more, presenting to city officials a set of model ordinances which had been prepared for the purpose, and requesting passage of these ordinances in order to facilitate better control of venereal diseases in the respective cities. As a result of this work all of the cities with a population of 10,000 and more, except Coffeyville and Emporia, together with a number of smaller cities, have enacted venereal-disease ordinances for the better control of these diseases.

As a part of the program, while visiting these cities, arrangements were made in each city for a meeting of the medical society, the purpose of venereal-disease control measures was explained to the physicians and their coöperation solicited. This policy has resulted in securing the complete coöperation of the medical profession. The State Medical Society at its meeting in Ottawa, in May, 1919, unanimously passed a resolution indorsing the venereal-disease campaign as conducted by the State Board of Health, and especially that part of it which had reference to treatment.

The physicians have been particularly pleased with the free laboratory service for the examination of smears for gonococci and for making Wasserman tests. They have also appreciated the offer of free arsphenamine for indigent patients and the distribution of the "Manual for the Treatment of Venereal Diseases." The method of reporting that has been put into effect has not antagonized physicians. In the first place, they were permitted to report by number only, and not required to give the name of the patient. In the next place, when reporting regulations were revised in June, 1918, it was made optional with the physician whether or not he would report the name of his patient. The purpose of the regulation was to require the reporting of persons who were irresponsible and could not be trusted to safeguard others from infection.

It was early recognized that there must be some activity on the part of the health authorities in greater Kansas City in order to limit the spread of venereal disease, not only in Kansas City proper, but in all the surrounding country of which Kansas City is the center. An effort was made to have an organization brought about that would place the health administration of greater Kansas City in the hands of a Federal representative. For a time it appeared as if such a plan for combined health administration in the two or three municipalities comprising the Kansas City metropolitan area might be successful. If the war had lasted longer and the need for such an arrangement had become more fully appreciated, the plan might have been put in operation.

Another important center for the dissemination of venereal disease is the mining district in southeastern Kansas, extending into Missouri and Oklahoma. In this section arrangements were made for the organization of a tristate sanitary district comprising certain parts of the three states. This organization is now going forward under the able direction of a Public Health Service representative.

LABORATORY.

One of the important accomplishments consisted in providing a free Wassermann service and free smear examinations for gonococci to the physicians of Kansas. For this purpose a laboratory was established at Rosedale in connection with the School of Medicine. The work of this laboratory since its establishment, the first of November, 1918, up till the end of May, 1919, is indicated by the following table:

REPORTS FOR ROSEDALE LABORATORY.

<i>Month.</i>	<i>Wassermann.</i>	<i>Colloid gold.</i>	<i>Nogluchiglobulins.</i>	<i>Urine.</i>	<i>Dark field.</i>
November	152	15	15	15	..
December	108	16	16	24	6
January	126	10	10	12	5
February	209	8	8	15	6
March	365	37	37	18	8
April	418	22	22	16	7
May	567	12	12	20	6
	1,945	120	120	120	38

Month.	Mercur. serum.	Salv. serum.	Con- tainers.	Gono- coccus.
November .....	..	..	..	..
December	80	8	..	..
January .....	..	4	82	..
February	44	5	90	6
March .....	..	8	586	15
April	80	..	860	20
May	42	..	652	83
	196	20	1,720	84

SUCCESS OF REPORTING SYSTEM.

That the reporting system adopted in this state has been successful in eliciting reports of venereal disease is indicated by the following table, which shows the number of cases reported for the past three and one-half years:

CASES OF VENEREAL DISEASE REPORTED TO THE STATE BOARD OF HEALTH.

	SYPHILIS.			
	1916.	1917.	1918.	1919.
January	2	4	6	25
February	0	2	12	35
March	4	3	11	79
April	1	3	8	91
May	2	5	81	165
June	1	0	86	..
July	1	3	52	..
August	0	8	51	..
September	8	12	104	..
October	0	19	63	..
November	2	21	40	..
December	0	44	21	..
	16	124	435	405

	GONOCOCCUS INFECTION.			
	1916.	1917.	1918.	1919.
January	18	0	19	134
February	12	1	28	124
March	7	5	33	215
April	3	6	39	172
May	0	0	57	200
June	8	2	93	..
July	4	3	281	..
August	3	8	204	..
September	2	43	300	..
October	10	53	164	..
November	0	36	128	..
December	12	36	127	..
	78	193	1,478	845

For the information of health officers a set of instructions has been drafted and is now ready for distribution. These instructions will aid the health officers in handling cases which come up for consideration. Since the fact that diseases are spread by persons and not by surroundings has been fully appreciated there has been necessarily certain changes in the method of handling communicable diseases. Attention is being focussed more and more upon the control of the individual. The local health officer is the official whose duty it is to control the individual. The ultimate success of venereal-disease work will depend quite largely upon the effectiveness of the local health administration. It was for this reason that the legislation proposed during the recent legislative session for the better control of venereal diseases included a measure to provide full-time health service for all local communities in the state.

CLINICS.

The treatment of persons infected with venereal disease for the purpose of rendering them noninfectious and incapable of transmitting disease to others is of primary importance in prosecuting the campaign against these diseases. Many physicians do not care to treat such diseases and would prefer having venereal cases treated in public clinics. Many persons infected with such diseases do not apply to physicians for treatment, but purchase medicine at a drug store and attempt to treat themselves, often with disastrous results to others, as they cannot be sure of becoming free from infection in this way, even though their condition should be improved. One of the important parts of the venereal-disease campaign, therefore, is the establishment of clinics where people infected with these diseases may receive free treatment. This work was not pushed vigorously at first for the reason that it was deemed advisable to permit discussion and agitation of the whole problem to reach a point where people were ready to act before a definite drive was made for clinics in the various cities. Accordingly, special efforts to secure the establishment of clinics in local communities were not made until Doctor Kilbourne was added to the staff last January. Six clinics so far have been established, and it is expected that another will be opened in Lawrence about the first of July. These clinics are as follows:

<i>Date established.</i>	<i>Name of place.</i>	<i>Physician in charge.</i>
July 1, 1918.....	Rosedale	Nelse F. Ocherblod.
July 5, 1918.....	Leavenworth	Wm. F. Reasner.
Mar. 1, 1919.....	El Dorado	Arthur D. Gray.
June 15, 1919.....	Wichita	W. T. Doherty.
June 16, 1919.....	Topeka	Earle G. Brown.
June 16, 1919.....	Atchison	C. W. Robinson.

It may also be mentioned in this connection that three clinics have been opened in the tristate sanitary district at Joplin, Mo., and at Miami and Pitcher, Okla. Although these clinics are outside the state, they are accessible to patients from Kansas and may be regarded as part of the equipment available for the prevention of venereal disease in Kansas.

FREE ARSPHENAMINE TO INDIGENT PATIENTS.

As only 22.7 per cent of the residents of Kansas live in cities of more than 10,000 population each, it is obvious clinics cannot be made accessible to all the people of the state, nor indeed to a very large proportion of them. In order that proper treatment may not be denied any one infected with venereal disease for lack of an expensive drug, arrangements have been made to furnish free arsphenamine to any regularly licensed physician in the state for treating indigent patients suffering from syphilis. That this privilege has not been abused is indicated by the fact that during the first three months after the announcement was made that free arsphenamine was available only sixty-three doses for fourteen patients were requested by physicians of the state.

SOCIAL SERVICE.

It is not generally appreciated that something more than drugs is required for the effective treatment of venereal diseases. Such diseases bear a more intimate relation to social conditions than most other diseases

with which the health officer has to deal. Persons who are treated in clinics and institutions for venereal disease are drawn largely from the lower strata of society. Such people are, for the most part, in need of advice and counsel from someone with a broader point of view and a firmer grasp on the realities of life. Thus there is need for a kind of service which is supplemental to direct efforts for preventing the spread of disease, but which is often of the highest importance as a health-protection measure. Personal services rendered to patients by persons qualified to do this kind of work is usually spoken of as social service. In developing social-service work in connection with venereal-disease control it has been considered that a course in nursing should be one of the qualifications of a social-service worker for the most effective work in this field. Thus social-service work in connection with venereal-disease control is regarded as a specialized development of public-health nursing.

As a preliminary to establishing a new kind of work it has often been found advisable to carry on sufficient investigation to definitely determine the need for such work in a given community. Accordingly a social-service investigator was employed for the purpose of obtaining information concerning the need for social-service work which might eventually lead to the establishment of such work in the various communities where required.

REPRESSIVE MEASURES.

Inasmuch as prostitution is the most prolific source of venereal disease, it has been deemed of high importance to institute measures for the repression of prostitution. In carrying out such measures involving the exercise of police power it is necessary to rely to a large extent upon local officials handling the matter in their own communities. For the purpose of obtaining information concerning such conditions which might be placed at the disposal of officials for action, and especially local officials in the extra cantonment zone about Camp Funston, a special investigator was employed for a period of about five months, from January 13 to June 13. Much of the time of this investigator was spent in the extra cantonment zone about Camp Funston, obtaining information and helping local officials in their work, but he has also visited a number of other cities and obtained information, which has been transmitted to the mayors of the respective cities with request for action. In some instances this information has been acted upon, while in others it appears to have been ignored. On the whole it is believed that where investigations have been carried on and information obtained and transmitted to the local officials, the tendency has been to stimulate somewhat the vigilance with which local officials have attempted to deal with vice problems.

THE DETENTION FARM FOR WOMEN.

One of the most unique and interesting features of the whole program carried out in Kansas is the Detention Farm for the quarantine of venereally infected women. This institution is built on the cottage plan and is maintained by the State Board of Administration as a farm colony. An attempt has been made to get away as far as possible from the institutional idea. Those who are familiar with the "Farm," as it is called,

realize that this attempt has been successful. The story of how the Farm came into existence reads almost like a fairy tale; it is a story of providing housing facilities and food for an increasing population of infected women without money with which to purchase such necessities. Logs were cut from green trees in the woods, sawed into lumber, which in turn were built into shacks by prison labor in order to provide housing facilities for the growing population of this Farm. Tents were erected for summer use and food was found in some way, so that the Farm was able to keep going and accept patients sent in under quarantine for venereal disease.

The most remarkable feature about the Farm is the fact that there is seldom an attempt made to escape, notwithstanding the absence of all physical barriers in the way of fences or walls. Last summer, when the Farm was most crowded, open tents were used for dormitories and there was literally nothing between those who slept in these tents and liberty except their own self-restraint. During the time that the women are kept at the Farm every effort is made to appeal to their higher natures. The response to this effort is apparent in the spirit of loyalty to the superintendent and her assistants, which restrains the patients from running away. The following tables give information concerning the inmates of this farm since it was established:

INMATES OF KANSAS STATE INDUSTRIAL FARM FOR WOMEN.

TABLE showing the number of women received and discharged each month, with reference to quarantine, vagrancy, misdemeanor and felony; also the number confined at end of each month, and number in custody ending March 31, 1919.

MONTHS.	Received.						Discharged.					
	Confined first of month.	Quaran-tine.	Va-grancy.	Misde-meanor.	Felony.	Total received.	Quaran-tine.	Va-grancy.	Misde-meanor.	Felony.	Total dis-charged.	Total confined at end of month.
1917.												
August.....	0	0	4	0	0	4	0	1	0	0	0	3
September.....	3	0	4	0	1	5	0	0	0	0	0	8
October.....	8	0	2	1	1	4	0	0	0	0	0	12
November.....	12	0	4	0	0	4	0	0	0	0	0	16
December.....	16	0	3	4	2	9	0	3	2	1	6	19
1918.												
January.....	19	0	2	1	1	4	0	4	0	0	4	19
February.....	19	4	12	1	2	19	0	4	0	1	5	33
March.....	33	14	19	5	2	40	0	1	1	0	2	71
April.....	71	17	5	2	4	28	1	0	1	0	2	97
May.....	97	19	2	4	2	27	7	7	1	0	15	109
June.....	109	52	9	6	0	67	5	7	1	0	13	163
July.....	163	33	2	3	13	51	6	4	3	3	16	198
August.....	198	38	12	4	0	54	16	11	5	1	33	219
September.....	219	60	2	6	0	68	28	16	3	0	47	240
October.....	240	20	0	0	0	20	42	7	5	4	58	202
November.....	202	40	0	1	1	42	54	5	2	2	63	181
December.....	181	38	2	0	2	42	44	7	5	5	61	162
1919.												
January.....	162	24	3	0	3	30	16	1	2	2	21	171
February.....	171	18	0	0	3	21	24	3	1	2	30	162
March.....	162	33	0	7	1	41	50	2	1	1	54	149
Totals.....	.....	410	87	45	38	580	293	83	33	22	431	.....

RECAPITULATION.

	<i>Received.</i>	<i>Discharged.</i>	<i>Confined</i> <i>March 31, 1919.</i>
Quarantine	410	298	117
Vagrancy	87	83	4
Misdemeanor	45	33	12
Felony	88	22	16
Totals	580	481	149

POPULATION OF STATE INDUSTRIAL FARM FOR WOMEN, BY COUNTIES.

TABLE showing total recapitulation of women received and discharged, by counties, from August 2, 1917, to and including March 31, 1919.

<i>Counties.</i>	<i>Received.</i>	<i>Discharged.</i>	<i>Confined.</i>
Allen	2	1	1
Atchison	11	6	5
Barton	2	2	0
Bourbon	1	0	1
Butler	12	9	3
Coffey	1	1	0
Cowley	10	5	5
Crawford	11	6	3
Dickinson	6	5	1
Douglas	3	1	2
Ellis	2	2	0
Ford	1	1	0
Geary	122	91	31
Harvey	8	1	2
Jackson	4	3	1
Johnson	1	1	0
Labette	1	0	1
Leavenworth	95	68	27
Lincoln	2	2	0
Lyon	2	1	1
McPherson	2	0	2
Miami	1	1	0
Montgomery	8	4	4
Neosho	3	2	1
Reno	39	31	8
Rice	1	0	1
Riley	120	108	12
Russell	1	1	0
Sedgwick	56	31	25
Shawnee	48	41	7
Sumner	1	0	1
Trego	1	0	1
Wyandotte	6	5	1
United States Civil	1	1	0
Totals	580	481	149

It will be noted that up to the end of March, 1919, 410, or 70 per cent, of the 580 inmates of the Farm had been committed under quarantine, while 87, or 15 per cent, were sent up after conviction of vagrancy, which is merely another procedure in dealing with this class of people—that is, 85 per cent of the inmates of the Farm had been placed there as a result of the campaign for the prevention of venereal disease. Not only are women held under quarantine for venereal disease in Kansas, but the same measure of protection against the spread of these diseases is applied to men. Up till the end of March, 1919, a total of 44 men had been placed under quarantine at the State Penitentiary, as is indicated by the following table:

•
MEN COMMITTED TO STATE QUARANTINE CAMP FOR MEN FOR
VENEREAL DISEASE.

TABLE showing recapitulation, by counties, of men received and discharged by commitment to the Kansas state quarantine camp for men for venereal disease, from April 2, 1918, to and including March 31, 1919.

<i>Counties.</i>	<i>Received.</i>	<i>Discharged.</i>	<i>Confined March 31, 1919.</i>
Atchison	2	1	1
Cowley	1	0	1
Dickinson	1	0	1
Doniphan	1	0	1
Geary	8	8	0
Linn	1	1	0
Meade	1	1	0
Riley	8	1	2
Sedgwick	26	11	15
Shawnee	5	4	1
Totals	44	22	22

THE LEGAL ASPECTS OF QUARANTINE.

At first there appeared to be some question as to the power of the Board of Health to provide quarantine procedure for venereal disease. After the past year's experience in the matter, during which several habeas corpus cases have been brought in an effort to secure release from quarantine, the conclusion has been reached that there is ample power vested in the health authorities in this state for quarantine to prevent venereal disease, when quarantine is necessary to accomplish that purpose. Briefly, the quarantine of venereal disease cases by the local health officer may be carried out upon the following authorizations:

(1) Regulations adopted by the State Board of Health in accordance with statutory provision.

(2) City ordinance adopted by council or commissioners of the local city.

(3) Irrespective of state regulations or local ordinance, the general health laws of the state vest the power of quarantine in the health officer as a necessary part of his equipment for protecting the public health. Thus the procedure for quarantine appears to be established upon a secure basis, and the reasonable exercise of this power by health officers is not likely to be seriously questioned in the courts.

EDUCATIONAL CAMPAIGN.

Recognizing that the general dissemination of information concerning the subject of venereal disease is fundamental to progress in combating such diseases, the educational campaign has been organized upon a broad basis. The extent of the campaign is illustrated by the printing of several pamphlets dealing with the subject in lots of 50,000 each. Motion pictures have been purchased and are in constant demand for use in various parts of the state. A special campaign among high-school boys was organized in coöperation with the Public Health Service. Fifteen sets of chart exhibits and ten sets of slides were secured and placed in the hands of volunteer workers throughout the state. The material for this campaign was not available until near the close of school. For that reason only a limited number of showings could be made. Reports of this work are not yet complete, but such as have been received indicate good results.

A similar campaign among high-school girls was anticipated and arrangements were under way to carry out the plan. The matter was delayed in order to make this work a part of the national campaign of like character, with the result that not much of this work was actually undertaken. This field may be developed during the coming year. It is hoped also that a more vigorous campaign may be conducted among high-school boys next year.

DEVELOPMENT OF DIVISION DURING SECOND YEAR.

The Division of Venereal Diseases during its second year has been beset with all the trials and vicissitudes that usually befall one of such tender age. The growth and development of the division have been very much retarded as a result of a severe case of inanition, due to a diminished and irregular supply of nourishment—the failure of adequate state appropriations. But at last a proper and wholesome supply has been secured and we feel that the third year will show a steady and healthy growth.

CLINICS.

The clinics at Rosedale, Topeka and El Dorado have been in operation throughout the entire year. Wichita opened her clinic July 15, 1919; Lawrence about October 1, 1919; and Kansas City February 1, 1920. Several meetings have been held with the city officials at Hutchinson to interest them in the establishment of a clinic, but as yet no permanent steps have been taken towards its organization. The table on page 346 shows the number of cases receiving treatment at the clinic during the past year. The Quarantine Camp for Men and the Industrial Farm for Women have been included in the report under the head "Lansing":

Coöperation of physicians in reporting venereal diseases has not been of the highest order. The number of cases reported to the State Board of Health from July 1, 1919, to May 31, 1920, are: Gonorrhea, 1,891; syphilis, 1,250; chancroid, 46; making a total of 3,187 cases. When we consider that practically two-thirds of these cases are reported either by clinics or the health officers, on commitment to the Quarantine Camp for Men and the Industrial Farm for Women, it shows a very small proportion as being reported by private physicians. We do not feel that this represents all the cases of venereal diseases which have been treated by the physicians of Kansas during this period of time.

Since January 1, 1920, out of a total of 1,264 cases reported, only seventy counties have reported syphilis and fifty-one counties have reported gonorrhea cases.

ARSPHENAMINE.

This division has purchased during the past year arsphenamine and neoarsphenamine to the amount of \$3,085. This has been supplied to physicians upon requisitions for treatment of indigent patients, and also to clinics, in which from July 1, 1919, to June 1, 1920, there have been administered 5,134 doses.

CLINIC CASES.

CITIES.	July.		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		April.		May.		Total cases.	
	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.	G.	S.
Topeka.....	7	3	6	9	4	4	22	2	14	2	7	2	3	3	7	3	4	5	6	1	16	3	96	37
El Dorado.....	19	17	21	29	18	30	14	25	14	25	14	22	14	20	17	28	23	20	21	15	17	14	192	243
Kansas City.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	2	4	6	6	2	9	12	24
Wichita.....	20	10	24	13	25	11	12	11	5	13	13	7	26	12	31	8	7	9	18	13	22	7	208	114
Lawrence.....	0	0	2	1	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2	0	0	1	3	4
Rosedale.....	13	47	13	39	5	34	11	87	1	23	4	28	8	41	4	28	2	53	4	31	7	35	72	446
Lansing.....	21	18	20	32	52	46	35	13	22	60	33	16	38	18	33	31	27	15	36	18	54	16	371	278
Totals.....	80	95	86	123	104	125	94	136	56	123	71	75	90	95	94	104	65	107	93	79	118	85	951	1,147

G.—Gonorrhea. S.—Syphilia.

QUARANTINE.

During the past year the State Board of Administration has very kindly coöperated in every way for the care and quarantine of both men and women by continuing to make available for this purpose the Quarantine Camp for Men and the Industrial Farm for Women. The following table shows the number of cases which have been handled by these institutions from April 1, 1919—the date used in the last annual report up to June 1, 1920:

	April.	May.	June.	July.	Aug.	Sept.	Oct.	
Male	16	21	31	8	10	18	11	
Female	35	32	26	18	26	27	18	
Totals	51	53	57	26	36	45	29	
	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	Total.
Male	11	15	12	10	9	11	18	201
Female	9	11	22	20	21	18	30	313
Total	20	26	34	30	30	29	48	514

REPRESSIVE MEASURES.

Little active work has been done in this department aside from seeking coöperation with local authorities in cleaning up and keeping clean their local communities. A social worker was maintained during August and September to follow up contracts as reported in the clinics, but owing to lack of funds this phase of the work had to be discontinued. This seems to be one of if not the best method of finding sources of infection and obtaining attendance at clinics. The report of the social worker while working with the division is appended as an example of the worth and character of the work which should be carried on at each clinic in the state.

TOPEKA, KAN., June 21, 1920.

Dr. B. K. Kilbourne, Chief of Division of Venereal Disease, State Board of Health, Topeka, Kan.:

DEAR SIR—I submit herewith report of work done by me during August and September, 1919:

AUGUSTA, KAN., August 1, 1919.—Interviewed Doctor Garvin, Butler county health officer, in regard to venereal-disease clinic, located in El Dorado, Kan.

EL DORADO, KAN., August 2, 1919.—Called on Dr. A. L. Gray, in charge of venereal-disease clinic, and made arrangements to assist him with treatments at clinic and make investigations in locating and persuading suspects to report at the clinic for examination, and arrangements for treatments, if infected.

August 3, 1919.—Called on Mr. Bursh, chief of police of El Dorado; Mr. Hugh, sheriff, and Arch Williams, prosecuting attorney, both of Butler county, and explained about the work and asked their assistance and offered to make any investigations which they would suggest.

During the two months 116 investigations were made; 48 persons were examined; 16 found to be negative and released; 19 found to be positive gonorrhea and arrangements made for treatment to be given at clinic; 18 found positive gonorrhea and taken to State Industrial Farm at Lansing, Kan.

118 gonorrhea treatments were given at clinic.

62 hours spent in clinic.

19 public dances inspected.

The latter part of September I asked Doctor Shoemaker, city health officer of El Dorado, to call a meeting of the board. Doctor Garvin, county health officer; Mr. Wells, city manager; Mr. Sandefer, county commissioner, and Doctor Shoemaker attended the meeting, held at the county courthouse. I made a report of the two months' work and made recommendation to the effect that they place a nurse in El Dorado to assist Doctor

Gray with the treatments at the clinic and make special investigations. They were very much interested and Doctor Garvin advised them as to the great need of such a nurse. During the two months in El Dorado we had wonderful coöperation with all public officers, both city and county.

PEARL W. BECKNER, R. N.

During the past year the laboratory at Rosedale has had a rather turbulent existence. Owing to inability to obtain funds for maintenance at the proper time Doctor Baker resigned, and the laboratory was closed October 30. It was not until December 15, 1919, that the necessary arrangements were made to continue this important part of the work, under the directorship of Dr. Donald R. Black. Owing to the location of the laboratory at Rosedale, and the very poor mail facilities, much confusion and delay both in mailing reports and receiving specimens has been experienced, notwithstanding which it has performed a large amount of real service to the citizens and physicians of Kansas, as will be seen by the following report:

WORK DONE AT THE STATE LABORATORY, ROSEDALE, KAN.,

January 1 to June 15, 1920, inclusive.

Complement fixation test for syphilis:

Positive	988
Negative	1,235
Unsatisfactory	273
Total number tests made	2,491
Percentage positive	49 +
Percentage negative	39 +
Percentage unsatisfactory	10 +

Report of examinations of specimens for gonorrhea:

Positive	53
Negative	602
Total number of examinations made.....	655
Percentage positive	8
Percentage negative	91

Owing to the fact that we have been unable to employ an educational director, the educational activities have been somewhat limited. These activities have consisted principally of lectures and moving-picture films presented by the chief of the division; and the educational exhibit, "Keeping Fit," for boys from fourteen to twenty years of age. The presentation of these exhibits has been handled entirely by Y. M. C. A. secretaries, high-school teachers and others who have volunteered their services for the work among boys. In addition, one set of the charts has been carried as a part of the exhibit on the health car "Warren." The total showings made of the "Keeping Fit" exhibit number 53, to a total attendance of 9,080, exclusive of those reached on the health car "Warren." The chief of the division has delivered 10 lectures to an average attendance of 262; 34 lectures with films to an average attendance of 314; making a total reached with some form of venereal-disease education of 13,296.

The division purchased an additional ten sets of "Keeping Fit" charts, one set of adult charts, and one set of slides for adults. There were also purchased and distributed among barber shops and pool halls 1,500 copies of a small cloth-bound book entitled, "Fighting Venereal Diseases."

For the pamphlets and bulletins previously printed by this division

and furnished by the U. S. P. H. S. there have been forwarded from the Service 565 requests, while 1,600 requests have come direct to the department. In filling these requests 18,403 copies of these pamphlets have been mailed. In addition, there have been 79,246 copies of these pamphlets used for distribution at lectures, film showings and by general circularization.

ANNUAL REPORT OF FIELD AGENT IN CHARGE OF THE BUREAU OF PROTECTIVE SOCIAL MEASURES.

JUNE 30, 1920.

To the Executive Officer, Kansas State Board of Health, and to the Inter-departmental Social Hygiene Board:

The following report is a summary of conditions as the writer has found them for the past year in the states of Kansas and Missouri. The conditions in many respects are the same, and for that reason the report embraces both states. The report gives the conditions as they exist in the state of Missouri and as they exist in the state of Kansas, but as a general rule it applies to both states. The writer's activities have been confined to the state of Kansas since March 15, 1920, when the Bureau of Protective Social Measures was established in that state. The writer's territory included Missouri for over a year prior to that time, and for that reason the agent is familiar with conditions as they exist there.

The writer has personally visited and taken up local conditions with the officials of twenty-five cities in the states of Kansas and Missouri this past year. It was found in the summer of 1919 there was a tendency on the part of the city officials to relax their efforts in combating venereal disease. Most of the officials at that time seemed to be of the opinion that the same efforts in combating venereal disease were not necessary, as the war was at an end and most of the soldiers returned to their homes. The officials admitted that a great deal had been accomplished during the war and the work should be continued, but as a general rule they were not doing their part in carrying on an effective and efficient program. After numerous conferences and visits the officials realized the program was one of a permanent nature and was not designed for only the period of the war. Conferences and interviews were held with the officials as individuals, and they were also called together, and conferences with all the officials assembled were held in many of the cities visited. It was called to their attention what had been accomplished, what was being done at the present time, and what was to be done in the future. Meetings and conferences also were held with the Chamber of Commerce, Rotary Club and other civic organizations to obtain their coöperation in the movement. The writer can now state the officials realize the program is of a lasting character, and in most communities arrangements have been made to carry the work on permanently. The writer does not wish to give the impression that in all of the cities visited a thorough and efficient program is in effect, but something is being done of a permanent nature in every one of those places. In many of the cities there is a free

clinic for the treatment of venereal disease. The clinics are permanent and the cities have made arrangements that they be continued on that basis. It is not the intention to give the impression that the writer personally was responsible for the cities establishing a free clinic, but in many instances it was due to the assistance that was given the states by this board through the Chamberlain-Kahn fund. The writer feels a great deal has been accomplished the past year, for the reason that practically everything that is being done now is of a permanent nature and the program is now on a firm peace-time basis. When it is taken into consideration that during the war many of the local communities were active and zealous in their efforts as a patriotic movement, it is easily recognized there would be a relaxation and a tendency to drop the activities that were for the protection of the soldiers when the armistice was signed and the emergency army demobilized. It was the duty of the agent of the board to overcome this tendency, and by calling on the officials and others as indicated this has been accomplished to a very great extent. The local communities now realize the agencies of the state and Federal governments are proceeding on a permanent basis, and for that reason what is being done is of a more thorough and careful nature than was accomplished a year ago.

One of the handicaps the agent was confronted with in establishing the program at the beginning of the year was the lack of coöperation between the local officials for carrying on an effective and efficient work. To a great extent this has now been overcome and the local officials are now coöperating, to the end that at many places excellent results are obtained. In the state of Missouri the program is hampered to a very great extent for the reason that there is no state institution where venereally diseased persons may be sent for treatment. The cities of St. Louis and Kansas City have local detention hospitals for the treatment of venereal-diseased patients. A place should be provided by the state where venereal-diseased patients can be sent from the local communities that are not large enough to support a detention hospital. In many places throughout the state of Missouri the local officials are confronted with the problem of having a large number of venereal-diseased prostitutes in their midst and by not having any place for their quarantine or isolation. This handicap is overcome to a great extent in many communities by having the venereal-diseased persons take treatment at the free clinic, but it does not solve the problem, and efficient and thorough work cannot be accomplished in the state of Missouri until a detention house is provided for the quarantine and isolation of venereal-diseased prostitutes. The necessity for a state institution for the venereal diseased has been called to the attention of many officials and other people throughout the state of Missouri, and the writer is in hopes that at the next session of the legislature this matter will be taken care of. In all of the cities where free clinics have been established good results have been obtained, and it has practically demonstrated the necessity for them.

A detention hospital has been established by the state of Kansas at Lansing, and for that reason the program is handled in a much more efficient and satisfactory manner in this state than in the states where

one has not been provided. A number of men and women throughout the state have requested they be sent to this detention hospital for treatment. This is sufficient recommendation for what has been accomplished and what is being accomplished at the present time. There has been some criticism about the detention house, and the writer thoroughly investigated this and found it was not based on facts and the person making the criticism was misinformed. The writer has visited this detention house a number of times and has found the management to be effective, thorough, and of the very best. Great care is given in the medicinal treatment and remarkable results have been obtained. An inmate of this institution gains on an average of twelve pounds from the date of admittance to the date of leaving. The detention house is located on a State Farm about two miles from Lansing and is surrounded by beautiful trees and gardens, that give it the appearance of a substantial country home. It is very beautifully situated and most of the inmates leave with more or less regret.

The question has arisen among many health officers and other persons interested in the venereal-disease question as to whether or not prostitution has been on the increase the past three years. Assertions have been made by some people that prostitution is now carried on to a considerably greater extent with young women who formerly were respectable when the red-light districts were open. It is also asserted that the closing of the red-light district in some of the cities has caused the prostitutes to scatter, and they now live in all parts of the city. The writer does not know of any city in either the state of Kansas or Missouri where a restricted district was once allowed to operate with immunity that kept the professional prostitute within that area. There is one particular city in the state of Missouri where it was maintained by some that before the closing of the red-light district the professional prostitutes were in a small area, but now they were scattered over the entire city. The writer took issue with some of the people of this city, and they finally admitted that the so-called restricted district covered an area of eighteen blocks long and seven blocks wide. There were disorderly houses conducted in all parts of that area up to the time of the closing of the open houses. This is given as an example to show the absurd claims that are being made at this time by some people who are in favor of a restricted district. As for the argument in favor of red-light districts for the reason young women were not molested then, there are no grounds or authority for this, and such statements are untrue and false and are made by persons who do not care as to the truth or untruth of the matter. The writer also has met a number of persons who maintained that a red-light district properly supervised and the inhabitants thereof regularly examined by physicians would reduce the venereal-disease rate. There are no grounds for this belief or this assertion, as the facts are all to the contrary. The average prostitute is diseased. In most cases the writer has convinced the person with whom he came in contact that the so-called restricted district with medical examination was not practical, and every place it had been given a trial had proved to be an utter failure; also that the professional prostitute can be eradicated where the local officials made a

determined effort to do so. In some places the writer has visited the police officials have frankly admitted the city was inhabited by a number of professional prostitutes. The officials seemed powerless to deal with this situation and made no determined efforts whatsoever to eradicate this condition, although ample state laws and city ordinances cover the situation. The writer has not visited a place where the professional prostitute could not be eradicated by a strict program of law enforcement. There is considerable laxity in general with enforcement of the laws with reference to prostitution, and as a result many cases of venereal disease are contracted that otherwise would be eradicated by strict and efficient law enforcement. A few venereally diseased prostitutes moving about the state will scatter the disease from one end to the other.

There is one class of prostitutes which may be termed the traveling prostitute, who moves from one city to another and carries on her illicit trade in hotels. This class of prostitute frequents not only the worst but the best hotels in the cities. In many cases this is done with the knowledge of the hotel management, but in many cases the management is entirely ignorant of it. A prostitute of this character, after locating in a hotel, communicates with the bell boy, and he solicits men for the woman. The writer has been surprised at the attitude shown by some of the managements of large hotels. The management of some of the hotels seem to have the opinion that immoral women about the hotel make it a drawing card for men traveling about the country. The management of many of the hotels do not seem to realize the average traveling man wants clean and wholesome surroundings and does not wish the attentions or flirtations of prostitutes. The management also owes a duty to the respectable woman who is traveling by herself, that the hotel be conducted in a proper and orderly manner, that suspicion be not thrown on this respectable woman, which in many cases now happens. Generally speaking, the hotel situation is bad. The hotels are primarily responsible for this, inasmuch as the average prostitute will remain but a few days in a hotel, and by the time the law-enforcement officers have sufficient evidence to warrant an arrest she has moved to another city. The writer feels that drastic action will have to be taken with reference to some hotels, not only on the grounds that they are becoming a menace to the public health from a venereal-disease standpoint, but also for the reason that a public place should be conducted in such a manner that a respectable woman can stop without fear of annoyance or suspicion.

The rooming-house situation in most cities is bad. The proprietors of many rooming houses know that their places are used for the purpose of prostitution and are in league with the prostitutes occupying these places. In some places where rooming houses were frequented by immoral women the proprietor has informed law-enforcement officers who investigated these places, at the request of the writer, that the women occupying the houses were employees. Nevertheless in many cases action was taken and convictions resulted.

The writer has found the public dance halls in some cities to be properly supervised, and the conduct of the dancers as good, and in many cases better, than at some private dances. In other places the writer has

found the dance-hall situation to be very bad and used as a meeting place for immoral women and men. There was no supervision whatsoever in some communities, and little girls with short dresses and braids down their backs were allowed to frequent these places until a late hour. These conditions have been corrected to a considerable extent, but the dance-hall situation is not properly supervised at the present time. There is a welfare board in the larger cities and an agent of that board attends every public dance and no one is permitted on the floor under eighteen years of age, and proper decorum generally is maintained.

The taxicab situation throughout the two states is not up to the standard that the writer feels should be maintained for that class of service. The writer feels every vehicle for hire should be registered by the state; also that the chauffeur's picture should be in a conspicuous place in the machine, and he should wear a badge issued by the state showing he is a licensed chauffeur. In many instances the writer has found taxicab drivers soliciting business for prostitutes. There also are a number of vehicles operated by private individuals, and in case of an injury it is practically impossible to ascertain what car or chauffeur was involved. It is therefore obvious that vehicles of all kinds that are used for the public carrying of passengers should be licensed by the state, and as such should be strictly supervised.

The parks in general are not properly policed at night, and some amusement parks have been used by prostitutes as a meeting place with young men. The park, as a general rule, only enters into the problem during the summer months, and for that reason does not present itself the entire year. The parks are not sufficiently policed, and by the placing of additional watchmen throughout them the problem to a great extent would be solved. The situation has been greatly improved in some places by placing a number of incandescent lights throughout the parks. The writer has knowledge of one instance a few years ago where a large search light was installed on a high platform in the center of a park. An operator moved the search light about the park, and when the rays revealed a couple who were inclined to become too familiar the light was allowed to rest at that particular place until their behavior had improved. This plan met with good success, inasmuch as any part of the park could be made as light as day at any moment and would cause any one who was in that particular place to become very conspicuous.

The writer has received good coöperation from the Federal, state and local officials where particular cases have been called to their attention. The military officials also have given good coöperation in these two states, and on numerous occasions they have been of valuable assistance.

The medical profession, as a whole, has given very good coöperation and assistance, but a number of individual physicians do not report cases and comply with the rules of the State Board of Health. It is hoped the individual physician will correct this neglect and to the best of his ability assist in combating venereal disease according to the rules of the State Board of Health and the program of this board.

A number of large corporations have learned that venereal disease takes from the employees' efficiency, and in a number of cases have dis-

tributed literature and given lectures to the men with reference to this subject. Recently the writer was requested by the chief surgeon of one of the large railroads that an educational program be given to the employees, and arrangements have been made whereby they will be shown moving pictures and given lectures with reference to the venereal-disease question. It is estimated that the average employee suffering from a venereal disease is from 30 to 40 per cent below efficiency. There are statistics that show venereal disease not only costs the state and local communities many thousands of dollars a year, but also the individual employer of labor. From an economic standpoint, if for no other reason, it has been shown beyond a questionable doubt that venereal disease should be eradicated, as it costs the individual employer of labor, as well as the state, more than any other disease. It is known that venereal disease and the results thereof costs the states of Kansas and Missouri up into the hundreds of thousands of dollars annually. When one takes into consideration the insane, the blind, the paupers and many others that become state charges as a result of venereal disease, it is apparent that aside from the health of the people it also causes a heavy financial loss every year.

The Chamber of Commerce, Rotary Club and a number of civic organizations have been of considerable value in arousing public opinion to the necessity of determined efforts with reference to the venereal-disease program. A number of these organizations have assisted in many ways and deserve considerable credit for the success of the program in some places. The Red Cross has not only given its moral support in many cases, but has assisted in a financial way as well.

In conclusion the writer will state that a great deal has been accomplished the past year, and he feels very much encouraged with the attitude of the officials and the public in general and is in hopes that the next year will show a considerable improvement in some of the places the writer feels at this time are a menace to the health of the community.

Respectfully submitted.

C. A. BANTLEON, *Field Agent.*

SOCIAL INVESTIGATION OF WOMEN QUARANTINED AT THE STATE INDUSTRIAL FARM, LANSING.

Upon receiving appointment as social investigator for the Division of Venereal Disease, Kansas State Board of Health, I was called in conference, November 18, 1918, with Doctor Crumbine and Capt. M. Knowlton, chief of the Division of Venereal Disease, to outline a plan of work to be covered in the time remaining of the year closing July 1, 1919.

It was decided to concentrate upon two main points: first, the collecting of available information on the social histories of women quarantined at the State Industrial Farm at Lansing, with the idea of determining underlying causes of delinquency; second, to follow up a number of discharged patients for the purpose of recording their subsequent histories, in order to ascertain how much, if anything, might have been accomplished towards their moral uplift at the Farm; also to see how

these returned patients are received in various communities and what chances are open for the women's rehabilitation.

In order that the quarantined women might be studied at first hand, it was decided that the social investigator enter the Farm at Lansing as an inmate.

On November 23 I called upon Dr. T. B. H. Anderson, of the United States Public Health Service, in charge of the Leavenworth zone, with a letter from the State Board of Health requesting that I be permitted to make an investigation of patients quarantined at the Farm. Details were discussed and a plan evolved by which I was to enter as an inmate, joining a group of fourteen women from Junction City who were arriving in the afternoon.

The girls alighted from the train, all in high spirits. They were in the charge of the sheriff of Geary county and accompanied by two women welfare workers, one from Junction City and the other from Manhattan. With both the sheriff and the welfare workers the girls were on excellent terms. The party was taken up to the farm in the "hoodlum wagon" and the warden's motor car. We were deposited at the "hospital," where we were told we must remain for five days in quarantine against influenza.

The "hospital," so called, is a temporary structure, like all the buildings on the Farm, and was originally the hired man's house in the days before the state took over the farm for its present purpose. It is a cottage of four rooms and two inclosed porches, one of the latter serving for the use of the matron in charge; the other being the place assigned to a girl, P. J., who assists the matron in caring for those girls who would be patients in an infirmary if there were one. At the time of our arrival there were two such patients—a young mother with a baby eight days old, and a girl of eighteen, suffering acutely from inflammation of the bladder, the matron said. She had been in bed ever since she came to the Farm, following her arrest with her husband and several other men, charged with highway robbery.

Mrs. H., the matron in charge of the cottage, directed us where to put our coats and hats. One of the Junction City girls had counted the beds and found we were four short. A girl with bobbed hair said, "They're clean, anyway. It won't hurt any of us that's been in jail three weeks to sleep on this floor."

Meanwhile two "old girls," at Mrs. H.'s direction, were bringing in to each of us a galvanized wash basin, a new tin cup, a half bar of Ivory soap, a towel, a nightgown, two sheets and a pillow case. The beds, stripped, revealed clean straw ticks, sweet smelling. Every bed had a pair of gray army blankets—clean ones. The absence of odors common to institutions was remarked by several of the girls, who contrasted their new surroundings with the jail they had left that morning, where many of them had been detained for more than a week.

One of the girls, whom the others called Ida, was deploring her miserable fate in coming to "such disgrace." Some one patted her on the shoulder, saying, "Fergit it, Ida; you been in jail too long to beef about this."

The inclosed porch reserved for the use of the matron held an extra bed. Mrs. H. happened to invite me to take this bed. Mrs. H. explained that the shower baths used in the summer were not available now because of some trouble with the plumbing; so, she said, baths would have to be taken in secluded corners of the cottage. There was only a limited quantity of hot water. Without any controversy, a certain portion of the girls elected to take their baths then; the rest waited until morning.

At seven o'clock Sunday morning Mrs. H. awakened us, asking one of the girls to make a fire in the stove in the largest room. There had been installed a system of heating, but, like the plumbing, it was giving trouble. One of the girls responded quickly to Mrs. H.'s request for the fire. Every day this job was performed willingly by one of the girls, each taking her turn without any urging or direction from Mrs. H.

There was no bureau in the "hospital." Two small mirrors were hung on the wall, and these spots were much in demand for hairdressing. The girls waited patiently for their turn at these mirrors and apologized good-naturedly if they stepped on each other's toes.

Our breakfast was brought in and placed on a small table, around which nine or ten girls could be seated. The rest of us, after filling our plates, sat around the wall, "like society dames at a tea," one of the girls remarked. The breakfast consisted of fried steak with gravy, home-made bread and coffee, with sugar and milk for those who wanted it.

After breakfast all those who had not already done so made their beds. Two girls volunteered to wash dishes. For this there was a barrel of hot water close to the door; this barrel was filled by the exhaust from the steam pipes.

A girl from the linen room came in carrying a load of clean underwear; another girl followed with a stack of gingham dresses. Mrs. H. gave out to each of us an undervest, a pair of drawers, a new pair of black cotton stockings, a combination "slip" of canton flannel, and a gingham dress. These garments were all well made and fitted comfortably. Each was marked with the initials of the wearer and the number which had been assigned to her by the matron the night before.

Mrs. H. announced that the cottage must be swept and scrubbed. Again two girls volunteered for the job. When it was done the cottage presented a very neat appearance.

Some of us had been watching P. J. bathe the new baby; others had been repacking their belongings in the smallest possible space, ready to turn over any surplus of clothing to Mrs. H. for safe-keeping. I was really the only one in the house who was not well acquainted with everybody; the girls from Junction City knew each other through their common jail experience. Several girls made friendly overtures toward getting acquainted; one of them told me her life history, apparently without reservation (see B 427). The girl with the bobbed hair (F 431) seemed the leader of the group. She explained that she had bobbed her hair because it got lousy in that "Junktown" jail. She asked me if I thought it cute. I admitted that I did. She is pretty in a hard sort of way; has a bold manner and a "tough" walk; smokes a great deal, and uses more profanity than do the other girls.

Sunday was a long day. Being in quarantine, we could not go to chapel. The old girls who came to the cottage on necessary errands spoke in high terms of the service. One girl said: "Mrs. Perry always speaks so nice, and, gee, you orter to hear the warden's wife pray; she looks like an angel."

Dinner was an ample meal—more meat, roasted this time, with gravy, boiled potatoes and beets, pie and coffee. Mrs. Perry had sent over several books, light fiction, and copies of the *Ladies' Home Journal*, *Pictorial Review* and *Home Companion*. The girls were more interested in the knitting and crochet patterns and in the advertisements than they were in the stories.

In the evening one of the girls (H 435) had "the blues." She was a bride of only six weeks. She didn't believe that any man would be faithful to an absent wife, and she begged to be allowed to return to her "little man," saying her home would be wrecked unless she were permitted to go back to him.

Before we went to bed, Tillie, a girl from another cottage, came in on an errand. She stopped to ask a question of a new girl about the crocheting she was doing. The new girl's work was coarse and soiled. Tillie said something in praise of the new girl's work; then drew from her own pocket a bit of exquisitely made lace which she was finishing. I had been struck with the beauty of Tillie's voice the first time I heard her speak; now I noted the daintiness of her appearance in the midst of the rather untidy-looking girls in our cottage. Her hair was soft and clean; her skin pink and healthy-looking; her eyes were clear; her hands beautifully kept. She carried herself with dignity, and while perfectly courteous to us all, there was a certain aloofness. Later I learned that she is what the girls call a state charge; that is, she is serving a sentence.

When we began to stir about Monday morning we greeted each other as old comrades. A Scotch Canadian girl (G 432) was much interested when she learned I had lived in the East. She assured me that Canada was a country where sin is almost unknown, while in the United States a girl's life is beset with temptations. She talked less of her own experiences than she did of those of her friend Margaret (N 439), who she said had a "swell man named Billie," who had been "awful good to Margaret," though he had failed, it seems, to make any effort to get Margaret out of trouble when she was arrested. Margaret, on the other hand, was extremely reticent on all subjects, Billie included. She neither wrote nor received any letters. She did have a picture of Billie, which she showed me rather shyly one day after we had got pretty well acquainted. The friendship of Margaret and the Scotch Canadian girl had begun in Junction City, whither they both had journeyed on the trail of their soldier lovers. The two girls looked out for each other's interests at all times. Temperamentally they were as different as possible. The Canadian girl was susceptible to any suggestion from anybody; Margaret did her own thinking and spoke her mind seldom, but on occasion very effectively.

The girls were interested at all times in getting information concerning the process of medical treatment; the examinations; the reports on positives and negatives. The new girls plied the old ones with questions

until they had become entirely familiar with the vernacular, if indeed they had not already known it before they came to the Farm. As time passed I was convinced that nearly every girl had had treatments at some previous time.

On Monday Mrs. Perry came to the "hospital" to meet the girls. Her sudden appearance created a stir; several girls rose and offered their chairs. Mrs. Perry said she preferred to stand, as she had something to say. She began: "Girls, you are not here because you want to be here, and you are not here because we want you to be here. We don't want you here; we haven't room for you, as you can see for yourself." This produced a laugh, the girls remembering their beds on the floor and the scramble to gather around the little table at mealtime. At once Mrs. Perry had their sympathetic attention. She said, in substance: "Now that you are here, we are going to see that you have good treatment, good medical treatment, and in addition to that the best care in every way that kindness and love can give. Most of you have known love at some time; you have all been loved by some one, and you have all loved some one. That is one reason why you are here. Women are not always wise in their affections; they are not always fair to themselves; that's why some of you are here." At this point many of the girls nodded in agreement.

Mrs. Perry looked about the room and commented humorously on the lack of conveniences, then on the poverty of the state of Kansas, not omitting to say that many good people in the state are watching the work at the Farm, which is on a different plan from that being done in other states; that these people are hoping to see it succeed so well in what it is trying to do for the girls that the state will be convinced that it is worth while to furnish money for the necessary equipment and the additional facilities for treatment. She suggested that if the girls could learn to turn the crude surroundings to their advantage it would be good training in resourcefulness, and would make them not only more appreciative of comforts when they would have them, but also better fitted to cope with the really big difficulties that always beset us. She said a word about the work to be done in the kitchen and in the sewing room, explaining that it was her wish to give every girl enough to do to keep her busy and to give her work of such a nature that she would feel herself trained in some practical way when she was ready to leave the Farm. In the days that followed the girls commented frequently on this talk of Mrs. Perry's. They agreed that "she is an awful good woman," and the new girls were hearing constantly from the old girls that Mrs. Perry was "kind and square."

I became well acquainted with the fourteen girls whom I lived with through the quarantine; also with Gladys, whose coming to the Farm I am describing elsewhere. In addition to these fifteen girls there was opportunity to observe a group in the sewing room, where I worked five half days. I was especially interested in J. K., a bright girl of twenty-five, who seemed to have a definite idea that she was profiting by her stay at the Farm. She was well, and she felt sure she could earn a better living now than she had ever been able to earn before. For instance,

she had learned at the Farm to make very nice buttonholes. She said she thought this a "fine chance to get cured up and start life over."

I was constantly impressed with the characteristics of the state girls (those serving sentences for specific crimes, of whom there were less than twenty) as contrasted with the diseased women sent in for quarantine. In nearly every instance the state girl was cleaner and neater in appearance, more industrious in her habits, more dignified in manner; while the diseased girls, with a few noticeable exceptions, engaged in coarse talk that was so distasteful to the state girls that they were often seen to withdraw in disgust. Among the state charges I met three school-teachers and one hairdresser; the previous summer there had been two stenographers quarantined for disease. At the time of my stay at the Farm the largest number of diseased girls gave their occupation as "waitress."

I gathered from their own accounts that among the fourteen diseased girls mentioned above and described in my "case report," poverty or abnormal home conditions—in some cases the two were associated—had forced the girl out into the world before she had completed the first six grades of school. Sometimes the death of a parent, the separation of father and mother, the introduction of a step-parent into the home; in short, the necessity—sometimes fancied, more often real—for the girl to get out and shift for herself before she was equipped to make her own way and before she had the sense to take care of herself.

In adult life these girls do not appear to have the ability to stand on their own feet, either economically or morally. With the women I observed moral courage was almost an unknown quantity. When the Junction City girls arrived at the Farm they were seething with indignation over what they believed to be the partiality of the local authorities of Geary county with reference to treatment accorded one Gladys, who, they all declared, was lots worse than any of them—"a regular prostitute," crooked in her mode of living and dishonest in all her relations. Every day I would hear Gladys condemned by the girls. Four days after the arrival of the fourteen, Gladys herself was brought to the Farm. She was a blustering, bragging, blarneying young woman, the daughter of a Scotch-Irish father and a half-breed Indian mother. She proved herself a liar the first day of her stay at the Farm. Despite this fault, added to the ones the girls said they were sure she possessed, she exerted immediately a leadership to which all the girls rallied. No one dared or cared to dispute her wild statements, which they all knew to be untrue. She wielded a strong influence that no one apparently tried to resist.

The girls have a pretty keen sense of justice, on the whole. Each looks out for herself first; almost every girl is quick to resent any overriding of the rights of a companion. There is little complaining of any sort. Life has dealt hard blows. Self-preservation has demanded a good deal of buoyancy on the part of these women. They are not ready to quit. Unconsciously, perhaps, they have learned to make adjustments—if poor ones—without much fuss. There is a disposition to discourage whining.

Elsewhere I have mentioned that the girls almost universally live up to a certain standard of politeness. This standard is not so high as to be

really difficult of attainment, but its simplicity has the virtue of workableness.

I found, on the whole, much more respect for another's privacy than I expected. In my own case I was somewhat at a loss to account for my detention at the Farm without indulging in wholesale falsifying, so I kept silent about "my past." I was asked a few questions during my first twenty-four hours with the girls; these I answered good-naturedly, but briefly, in order to avoid future complications. My reticence was respected; nobody appeared to have any real curiosity; I was accepted and made to feel entirely at ease.

These women are "just folks." They like what we like. The rich autumn foliage on the hills beyond; by night, twinkling stars and the hunter's moon, flooding the fields that slope away toward the prison; a clump of yellow chrysanthemums, unmolested by the heavy frost—everything beautiful finds a response in the hearts of these girls, though its expression be only the ever-ready, crude, "My Gawd, that's pretty." And how they love children—their own and other people's! The little baby in our cottage never had less than four volunteer aids to attend his bath. Mrs. Perry summed it up when she said, "You are often unwise in your affections." Many also are unselfish. Some take pride in remembering that they refused to "squeal" on a companion.

The majority of the women, while restless under restraint and eager to get out as soon as possible, seem grateful for the medical treatment given them at the Farm. Their rapid physical improvement under treatment is sometimes accompanied by a mental and moral awakening. The pleasant "home surroundings" at the Farm tend to arouse in the girls the desire to live decently when they get out.

Mrs. Perry and her matrons put a great deal of their personality into the daily life at the Farms; contact with the girls is close; the results of the association show in many ways. Many of the girls, in a few days after they come to the Farm, feel that these women are genuinely interested in them. Before they leave they are likely to feel that they have made at least one or two friends. They are morally bolstered up in the belief that they have made good with somebody that counts. All that is possible is done by Mrs. Perry to keep in touch with the girls after they leave. She writes them personal letters giving counsel that is motherly without being "goody-good."

Now, if ever, when the girl leaves the Farm is she ready to try to take her place as a member of society. She has had the care necessary to restore her health; she has been working under such supervision as may be supposed to be directed towards improvement in this work. Other girls besides J. K. who learned to make good buttonholes told me that they could sew better since Mrs. X "showed 'em how." This increased efficiency, if only slight, is a step in the direction of helping the girl towards a better solution of her economic problem.

But with the best intention to keep straight she is not going to have an easy road to travel. If she goes to new surroundings she is lonely. If she returns to the old environment her former companions are natural associates. She needs real friends if anybody ever did. I believe the

kindness, the wholesome friendliness and wise counsel of sympathetic, intelligent women might enter in at this point to help the girl find a place for herself.

With reference to the training of these girls for such work as may be calculated to help solve their future economic problem, I believe that nearly everything possible is being done with the present equipment at the Farm to inculcate habits of thrift and industry. In all cases the girls are put at some form of occupation. All the work connected with the maintenance of the farm and the making of a portion of the clothes worn by the men in the state prison is carried on by the labor of the girls. This offers a fair diversity of occupation for the women.

I can make this suggestion: If it were possible to increase, somewhat, the instructing force at the Farm and to add such simple equipment as seems absolutely necessary, there could, perhaps, be arranged a program of intensive training for all inmates—even for those girls who are in the institution only ten weeks.

This is a problem to be worked out by experts in industrial education. My suggestion is probably right in line with the idea Mrs. Perry is now trying to carry out. She tells me she is arranging conferences with several women who are teachers of women's industrial arts, and that it is her hope to make and carry through a program that will, as far as possible, enable her to offer to every girl coming under her direction some additional training in such work as she seems best fitted to do and to turn to account for her own future good.

At the Farm I did not see as many girls who appeared to be feeble-minded as I had expected to find. My opportunity for observation was not wide, nor have I the ability to make tests. I saw a few girls in whom evidences of defective mentality were so conspicuous as to make them obnoxious to others. In the case of a girl who returned to the Farm after attending the funeral of a relative, and then proceeded to relate the horrid, morbid details of what she had observed and of what she imagined she had observed, the girls who listened shuddered and got out of hearing as quickly as possible. This girl appears to be almost wholly irresponsible. She is only seventeen years old. Released from restraint when she becomes noninfectious, she would be a serious menace to society.

The need of additional facilities for medical treatment is glaring even to the eye of the average inmate. Meager equipment in the clinic is likely to hamper the nurse and physician in administering routine treatment. The "linen room" used as a clinic is clean; it is a small room with one south and one west window. The partitions separating it from the other rooms are thin. The only entrance to the clinic is by way of the combination living room and dining room of the "big house," which serves as the home for Mrs. Perry and some dozen or fifteen girls.

The building now being used as a hospital is simply a clean little cottage with no conveniences and a very uncertain heating arrangement. It is lighted by electricity. The capacity of the institution is so taxed that there are times when every bed in the "hospital" has to be used. At times of crowding a certain number of girls for whom there cannot be found room elsewhere have to be assigned beds in the "hospital." The

difficulties of operating an institution under such crowded conditions are manifest.

Besides a hospital and additional clinic equipment, the biggest need for the institution, to my mind, is a resident nurse. There are certain obvious advantages on the medical side of the work to be derived from having a nurse on the ground constantly. She would be available in emergencies.

A nurse could also be in charge of the educational public-health work. And besides instructing the girls in measures essential to their own physical well-being, the nurse, if she possessed those qualifications that have made certain women so valuable as visiting or community nurses, would be of value as wise counselor to the girls. The "big sister" who has, besides a ready sympathy, a deep intelligence, may wield an influence among these women that might govern their future actions. The girls have a profound respect for what many of them call "secret-service" workers. This is the term they apply to the Public Health Service physicians, and to all the authorities carrying out Public Health Service instructions with whom they come in contact. A nurse vested with authority from the organization which they have come to respect, as well as to fear, might easily become the most powerful factor in the combination of good forces at work at the institution. Without forgetting that the aim of the institution is primarily concerned with the segregating of diseased women, who if allowed to remain at large are a menace to public health, I am wondering if public health is not concerned with trying to guide aright those members of society who have violated its health laws in the past. When these same offenders are released from restraint they may repeat their offenses, or they may abide by the knowledge instilled in their minds during their detention. As a preventive measure, it may be worth while to attempt a simple program of public-health education for these individuals who come under the care of the state.

BULLETIN
OF THE
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S. J. CRUMBINE, M. D., Editor.

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No. 7.

JULY, 1918.

VOL. XIV.

**When and How
to Tell
“The Story of Life”**

**Recipients of this Bulletin Who Have No Family,
Please Hand to Some One Who Has Children.**

Parents Please Read and Preserve.

MORBIDITY REPORT FOR JUNE, 1918.

COUNTIES AND CITIES.	Typical and particular
The State.....	92
Alex., except.....	0
Iola.....	7
Anderson.....	0
Atchison, except.....	1
Atchison city.....	2
Barker.....	0
Barton, except.....	0
Great Bend.....	0
Bourbon, except.....	0
Fort Scott.....	0
Brown.....	0
Butler, except.....	0
Augusta.....	0
El Dorado.....	0
Chase.....	0
Chautauque.....	0
Cherokee, except.....	0
Galesburg.....	0
Cheyenne.....	0
Clark.....	0
Clay.....	0
Cloud, except.....	0
Concordia.....	0
Coffey.....	0
Comanche.....	0
Cowley, except.....	0
Arkansas City.....	0
Winfield.....	0
Crawford, except.....	0
Pittsburg.....	0
Dearborn.....	0
Dickinson.....	0
Dwight.....	0
Douglas, except.....	0
Lawrence.....	0
Edwards.....	0
Ellis.....	0
Ellsworth.....	0
Finnery.....	0
Ford, except.....	0
Dodge City.....	0
Franklin, except.....	0
Ottawa.....	0
Geary, except.....	0
Junction City.....	0
Gove.....	0
Graham.....	0
Grant.....	0
Gray.....	0
Greeley.....	0
Greenwood.....	0
Hamilton.....	0
Harpur.....	0
Harvey, except.....	0
Newton.....	0
Haskell.....	0
Hodgeman.....	0
Jackson.....	0
Jefferson.....	0
Jewell.....	0
Johnson.....	0
Kearny.....	0
Kingman.....	0
Kiowa.....	0
Lahetta, except.....	0
Parsons.....	0

MORBIDITY REPORT FOR JUNE, 1918—Concluded.

COUNTIES AND CITIES:	Typhoid and paratyphoid	Smallpox	Diphtheria	Scarlet fever	Measles	German measles	Whooping cough	Chickenspox	Mumps	Pneumonia	Meningitis	Poliomyelitis	Malaria	Other communicable diseases
Lane.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except.....	1	0	0	32	5	0	3	0	0	0	0	0	0	15
Leavenworth city.....	1	5	9	2	0	1	0	0	0	1	0	0	0	0
Lincoln.....	0	0	0	0	0	0	11	0	1	0	0	0	0	0
Linn.....	0	7	0	0	2	0	0	0	0	0	0	0	0	0
Logan.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Lyon, except.....	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Emporia.....	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Marion.....	1	2	0	0	6	0	0	0	0	0	0	0	0	0
Marshall.....	0	11	0	4	7	0	0	0	5	0	0	0	0	0
McPherson.....	0	1	0	3	21	0	5	0	1	0	0	0	0	0
Meade.....	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Miami.....	0	8	1	2	4	0	0	0	0	0	0	0	0	0
Mitchell.....	0	7	1	2	7	0	0	1	1	0	0	0	0	0
Montgomery, except.....	0	15	1	3	3	0	13	0	1	0	0	0	0	0
Coffeyville.....	0	7	0	4	1	1	1	0	0	0	0	0	0	0
Independence.....	1	4	0	0	2	0	17	0	1	0	0	0	0	0
Morris.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morton.....	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Nemaha.....	1	0	1	3	0	0	1	0	0	0	0	0	0	0
Neosho, except.....	1	1	0	0	7	1	0	1	0	0	0	0	0	0
Chanute.....	0	9	0	1	8	0	1	1	0	0	0	0	0	0
Ness.....	0	5	0	5	3	0	0	3	0	0	0	0	0	0
Norton.....	0	0	0	0	2	0	1	0	0	0	0	0	0	0
Osage.....	1	0	0	1	0	0	2	0	1	0	0	0	0	0
Osborne.....	0	5	0	0	1	0	0	0	10	0	0	0	0	0
Ottawa.....	0	0	0	0	0	1	8	0	0	0	1	0	0	0
Pawnee.....	1	3	0	0	0	0	0	0	0	0	0	0	0	0
Phillips.....	0	0	0	1	9	0	18	0	0	0	0	0	0	0
Pottawatomie.....	0	2	0	1	1	0	5	0	2	0	0	0	0	0
Pratt.....	1	5	0	1	1	0	0	0	0	0	0	0	0	0
Rawlins.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Hutchinson.....	0	9	0	4	3	1	0	2	6	0	0	0	0	16
Republic.....	2	2	0	1	8	0	2	0	0	0	0	0	0	0
Rice.....	1	2	0	0	16	17	1	0	2	0	0	0	0	0
Riley, except.....	0	0	0	0	0	0	2	0	1	0	0	0	0	0
Manhattan.....	0	0	0	2	0	1	15	0	13	0	0	0	0	4
Rooks.....	0	6	0	0	0	0	1	0	1	0	0	0	0	0
Rush.....	6	0	0	0	0	0	1	0	0	0	0	0	0	0
Russell.....	1	0	0	0	4	0	0	0	0	0	0	0	0	0
Salina, except.....	0	0	0	0	0	0	2	0	1	0	0	0	0	0
Salina.....	1	7	0	0	9	0	1	0	0	0	0	0	0	0
Scott.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Sedgwick, except.....	2	1	0	1	2	0	2	0	6	0	0	0	0	0
Wichita.....	9	39	2	4	15	1	32	0	7	4	0	0	0	14
Seward.....	0	8	0	0	3	0	0	0	0	0	0	0	0	0
Shawnee, except.....	0	7	0	5	0	0	1	1	0	0	0	0	0	0
Topeka.....	2	17	4	9	14	0	10	5	11	0	0	0	0	12
Sheridan.....	0	0	1	0	7	0	0	1	0	0	0	0	0	1
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Smith.....	0	6	0	2	11	0	6	2	0	0	0	0	0	0
Stafford.....	0	8	0	1	1	0	1	0	0	0	0	0	0	0
Stanton*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	3	0	0	1	0	0	0	0	0	0	0	0	0
Sumner, except.....	1	1	1	3	16	5	5	10	4	1	0	0	0	0
Wellington.....	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Thomas.....	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Trego.....	0	2	0	0	1	0	0	0	0	0	0	0	0	0
Wabaunsee.....	1	0	0	2	10	0	1	0	7	0	0	0	0	0
Wallace.....	0	0	0	0	1	0	9	0	0	0	0	0	0	0
Washington.....	0	0	0	0	2	0	1	0	4	0	0	0	0	0
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	1	8	0	3	17	0	4	0	1	1	0	0	0	1
Woodson.....	2	1	0	0	3	0	2	0	0	0	0	0	0	1
Wyandotte, except.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Kansas City.....	10	16	9	4	37	2	16	2	7	3	1	0	0	15
Rosedale.....	0	0	0	0	0	0	0	0	0	0	0	0	0	17

* No report.

Other communicable diseases: Cancer, 11; dysentery, 1; erysipelas, 4; gonococcus infection, 93; impetigo contagiosa, 3; ophthalmia neonatorum, 1; pellagra, 4; septic sore throat, 3; syphilis, 36; tetanus, 2; trachoma, 9.

A Word to Parents.

The parent should not be content with these few suggestions, but should obtain further information from lectures or from the reading of good books. There are many books which explain the facts of reproduction for the benefit of parents. There are others that parents can read aloud to children six to twelve years of age, and there are still other books that can be put into the hands of older boys and girls. Pamphlets also may be had that wisely can be given to boys and girls twelve years of age and over. The subject is so important that parents cannot afford to neglect giving it careful thought and study.

The following pamphlets will be sent on request free of charge. Please send for only those pamphlets for which you have definite use.

Set A—For Young Men.

- 2. A Reasonable Sex Life for Men.
- 7. Sexual Hygiene for Young Men.
- 8. Vigorous Manhood.
- 4. Smash the Line. (The case against the restricted district.)
- 14. List of Reliable Pamphlets.

Set B—For Public Officers and Business Men.

- 1. Public Health Measures in Relation to Venereal Diseases.
- 3. Venereal Diseases—A Sociologic Study.
- 4. Smash the Line.
- 5. The Need for Sex Education.
- 6. A State-wide Program for Sex Education.
- 14. List of Reliable Pamphlets.

Set C—For Boys.

- 8. Vigorous Manhood. (Especially for boys twelve years of age and over.)
NOTE.—For boys under twelve, see pamphlet No. 9 (Set D). Portions of No. 8 also may be read to younger boys. Boys fifteen years and over may be given pamphlet No. 2 (see Set A) at the discretion of the parent.
- 7. Sexual Hygiene for Young Men.
- 14. List of Reliable Pamphlets.

Set D—For Parents.

- 9. When and How to Tell the Children.
- 3. Venereal Diseases—A Sociologic Study.
- 5. The Need for Sex Education.
- 14. List of Reliable Pamphlets.

Set E—For Girls and Young Women.

- 10. Womanhood. (Especially for girls eleven years of age and over.)
NOTE.—For girls under eleven, see pamphlet No. 9 (Set D). Portions of No. 10 also may be read to younger girls. Girls fifteen years and over may be given pamphlet No. 11 at the discretion of the parent.
- 11. Marriage and Motherhood.
- 14. List of Reliable Pamphlets.

Set F—For Teachers.

- 12. The School Teacher and Sex Education.
- 13. Sex Education in the Home and High School.
- 3. Venereal Diseases—A Sociologic Study.
- 4. Smash the Line.
- 5. The Need of Sex Education.
- 14. List of Reliable Pamphlets.

Address STATE BOARD OF HEALTH, TOPEKA, KAN.

When and How to Tell the Story of Life.

A twentieth-century mother's little boy had been brought to her bedside and introduced to his two-day-old baby sister. In answer to the child's question as to where the baby came from, she said, "Baby sister came out of mamma's body; she was made out of mamma's blood. That is the reason why mamma's hands are so thin and white and mamma's cheeks so pale."

"Mamma, was I made inside your body and out of your blood?" the boy asked in wonder.

"Yes, son, you were. And that is why mamma loves her little boy so, because she gave her own life's blood to make his body."

The little boy's eyes took on a far-away look as he tried to grasp the idea. Presently the child mind got a concept of the mother sacrifice. With eyes filled with tears he turned to his mother and throwing his arms around her neck cried, "Oh, Mother, you don't know how much I love you."

In telling the truth in this matchlessly simple and beautiful way, that mother made a new bond between her own and her boy's heart which will hold them together in harmony and love throughout life. By thus filling her child's mind with the thought of sacredness of motherhood, that mother gave no place for noisome weeds of vulgarity and obscenity to germinate and to grow. To that boy parenthood always will be a sacred relation. A child thus rightly started in his knowledge of motherhood and sex is saved from all that is vulgar, for he acknowledges only that which is pure and wholesome.

HOW TO BEGIN.

A natural curiosity about birth and sex exists in all normal children. This curiosity generally shows itself at the age of from four to seven. When a little child first asks, "Where did the baby come from?" or "Where did the kittens come from?" the mother's opportunity has come. An evasion or a falsehood now may be disastrous. Later when the child discovers that he has been deceived he will not likely return to his mother to learn more. He will go elsewhere.

Parents, both father and mother, ought to be prepared for four possible situations:

1. The child may ask some question as "Where did the baby come from?"

This question may be answered truthfully and wisely in some such way as this: "Babies grow inside their mothers' bodies just as little birds or chickens grow in the egg. The birds hatch from the eggs, and

when their wings are strong enough they leave the nest. In the same way babies, after they have grown enough, come out of their mothers' bodies, and we say that they are born."

2. A child may ask some unexpected question, as "What does it mean to be half Shepherd and half St. Bernard? or he may name some other breed of common pet or animal with which he is familiar.

He may be answered as follows: "This dog is half Shepherd and half St. Bernard because one of his parents is a Shepherd dog and the other is a St. Bernard dog. All little dogs must have a father and a mother. Birds have a father and a mother, too, just as babies must have a father and a mother."

Such an explanation will satisfy a young child completely. It may be desirable to show an older child some simple flowers or vegetables and to continue the explanation as follows: "The fine yellow dust on these flowers is called pollen. When the bee goes from one flower to another it carries pollen, or it is carried sometimes by the wind. This pollen contains the male or father cells. They go down through the slender tube in the center to the bottom of the flower, where they find the female or the mother cells. There the two cells unite. Then the new cells are formed into seeds. These seeds may be planted and they will produce plants, which in turn will bear flowers like these. So in all kinds of vegetable and animal life there are male and female cells. Both a father and mother are necessary to the development of the young."

A boy or girl of high-school age may be permitted to dissect the male and female organs of reproduction of chickens, rabbits or other fowls or small animals which are being prepared for the table. Such investigation will completely satisfy all curiosity concerning reproduction, and the boy or girl will not be inclined to associate with animal reproduction anything vulgar, nor will they be interested in anything lewd.

3. A child may ask a question beyond his years—some question the answer to which he is too young to understand.

It may be necessary to postpone a reply, but the parent never should evade the question or show amusement or surprise. He should answer directly and promptly that the question is one that cannot be explained until the child is older—just as there are questions about the stars or about steel bridges which he cannot understand until he is in a higher grade at school. The parents always should add that these questions will be explained later when the child is old enough, and that at any time he may come again and ask this or any other question.

If the child does not seem satisfied the parent should attempt to answer the question in a direct manner rather than accept the risk of his going elsewhere for an answer. Most of a child's questions may be answered in safety by the use of the simplest language.

The parent should in all events keep the child's confidence by frankness, and should always keep the avenue of communication open.

4. A child may not ask any questions at all, either because he has had his curiosity satisfied from other sources, or because he has gotten the idea that in some way it is improper to mention matters of sex.

If a child asks no questions or makes no easy opening for the parent, then the parent should begin by referring to the recent birth of some pet animal or a baby. This always should be done before the child first enters school or mingles much with other children.

Should the child ever have been deceived, the parent may say: "Do you remember when you asked me where the baby came from, I told you that the doctor brought him? Well, that is the way mothers answer little children, just as they tell them that Santa Claus brings Christmas presents. Now you know that father and mother are Santa Claus. You are now older, so I can explain to you that babies really come from the mother's body."

Many parents would not hesitate to answer the child's simpler questions or to open up this subject with the child if they only knew to where the first question would lead. It is not necessary to tell a little child much. It is sufficient merely to satisfy his natural curiosity and to keep him feeling that he may come again to the parent with any questions.

From the very first the child should be made to feel the sacredness of parenthood. He should understand also that it is perfectly proper to speak to his parent about many things concerning which it is very improper to speak to others. Thus at an early age the child may learn of sex in a clean way and at the same time he may learn to be properly modest and reticent.

INSTRUCTION SHOULD BE GIVEN STEP BY STEP.

The parent should not try to tell the child many new facts at one time. Opportunities will occur for adding information as the child and parent observe the life of the plants and animals around them.

In the spring the child may be shown how the birds mate and how two of them are always together while building the nest; how, after a time, the eggs are laid in the nest and the mother bird rests upon them with her warm body for a period of ten to twenty days, leaving the eggs only for a few moments to get necessary food; and how, at the end of that time, the young birds begin to hatch. The parent may explain how the mother bird continues to protect them with her body, giving up, if necessary, her very life for their protection from enemies until the little birds are able to fly and to care for themselves. Where young chickens are raised a similar explanation may be given.

The same information can be conveyed little by little concerning the birth of the dog, of the lambs on the farm, of the calves and pigs. Each lesson will give the child new opportunities to ask questions which have come into his mind since the previous talk. From the many talks and lessons the child eventually will grasp the idea that everything that lives has babies and that motherhood and fatherhood are universal. He will then have no further curiosity about where the babies of various kinds come from, and he has the surest sort of protection against vulgar suggestions concerning parenthood and sex.

Two or three years after the first instructions, or when the child is about eight or nine years old, it naturally will be curious to know what is the father's part in reproduction. The parent may explain again the fertilization of the female cells in the flower by the male cells. The child then may be told that the male cells are in the sex glands and that they pass from the father to a nest in the mother's body where the female cells lie, and where the baby will grow carefully protected from harm.

LATER INSTRUCTION.

Before the girl begins to develop into womanhood, at about twelve to fourteen years of age, and before the boy begins to develop into manhood, at about thirteen or fourteen, the changes that are to take place should be explained. The boy and the girl should understand that the new sensations and impulses that come to them at this time are indications that their bodies are being prepared for the duties and responsibilities of motherhood and fatherhood.

It is highly important that girls of this age should be taught how to care for themselves at the time of the menstrual period. Boys should understand that seminal emissions generally begin at about fifteen to seventeen, that they are normal, and that no attention need be paid to them unless they occur oftener than two or three times a month. Boys should be taught that the duty they owe to their sisters and girl friends is to keep them safe from all harm; that one foolish act on their part may wreck forever the life and happiness of their young girl companions, and if they make free with immoral girls their own health and happiness may be forfeited forever.

As boys associate more and more with their fellows at fifteen years of age and beyond, they have a right also to some definite knowledge of sex diseases. The amount and kind of information can be regulated to suit the individual boy. When girls are exposed to the dangers of questionable companions they should be warned that unscrupulous and clever young men may suggest conduct which is most dangerous. They too should be told of the dangers of such conduct and of the seriousness of sex diseases.

The purpose of all instruction should be to create in the minds of both girls and boys the idea that sex life is a part of the broad scheme of nature, given to us not for the gratification of pleasure, but for the wise purpose of perpetuating our own kind.

Boys and girls should be encouraged to mingle socially at frequent intervals. It is important that the association be wholesome and that adults should always be present at their social gatherings.

THE IMPORTANCE OF HEALTHFUL LIVING.

It is important to guard well the health of boys and girls. They should eat wholesome food and keep the bowels in good working order. They should have an abundance of exercise and fresh air and from eight and one-half to twelve hours' sleep each night, depending on their age. As an aid to cleanliness and clean living, it is well to have boys circumcised when the foreskin of the sex organ is so long that it cannot be drawn back and washed clean. This operation will aid in keeping the organ free

from an irritating, cheesy substance. The operation is best performed when the child is a few weeks old. It may be performed at any age.

THE NEED FOR SEX EDUCATION.

During the last ten or fifteen years society has been learning that many tragedies in marriage and much suffering among innocent women and children have been caused by sex diseases. It is believed that the spread of these diseases has been due largely to ignorance and false ideas regarding sex. Formerly the subject of sex was associated with secret and vicious practices; to discuss it was indecent. Now men and women are coming to understand that the sex function is intimately connected with the physical, mental and moral development of the individual and with the welfare of the entire race. People are learning that its right use is the surest basis of health, happiness and usefulness, and that it is a subject vital to nobleness, purity and health. It is believed that sex education in large measure will remedy sex evils.

Moreover, it has been discovered that many of the disasters mentioned are due to false ideas acquired in childhood. When a mother evades the questions of her child regarding the facts of birth, or answers them untruthfully, his questions thereafter are generally directed toward other sources of information. The results are often most unfortunate. Sex education, therefore, should begin in the home not later than the time when the child asks its first question about the origin of life. It should proceed in easy, progressive stages, a little here and a little there, on through the years until the child has become an adult.

THE COOPERATION OF ALL INVITED.

The war has made it necessary for the nation to face frankly the problem of venereal diseases. The failure of European nations to recognize their seriousness has resulted in the withdrawal from the fighting line of hundreds of thousands of troops who have become incapacitated for service because of these diseases. To prevent such conditions as have developed in European armies, the war and navy departments of the United States are developing a thorough social hygiene program. What is being done within the camps and in communities in the vicinity of camps, however, is insufficient. Conditions in the army will depend largely upon conditions throughout the civilian population. It is a duty, therefore, for every one to acquaint himself with the seriousness of sex diseases and regarding the normal functions of the sex impulse in human life, and to give every child or young person in his care such instruction as will enable him or her to attain a happy sex life and healthy parenthood.

Summer Care of the Baby.

Summer heat is especially disastrous to the baby because the heat-regulating mechanism of his body is not fully developed, and because his powers of resistance are not as great as in the adult. For this reason especial care is necessary to adapt surroundings to his comfort and safety.

CLOTHING.

Babies are commonly dressed too warmly in hot weather, particularly during the "heat of the day." During the hottest hours of the day or during continuously hot weather, a light-weight, knitted woolen band without sleeves and a loosely adjusted, clean, dry diaper pinned to the band in the front and in the back are all the baby needs to wear. The thin woolen band protects the vital organs from congestion caused by surface chill, in case a cool breeze comes up suddenly or the baby cools off quickly from any accidental reason. For the rest, he needs free access of air to the surface of his body as much as does the adult. All clothing should be soft and clean and dry. Diapers need special care during hot weather and should be always rinsed in hot water and dried before being used again after being wet with urine. Rubber diapers should never be used except for the briefest possible intervals while traveling.

BATHING.

Daily bathing is indispensable to the comfort and well-being of the baby in hot weather. It should have a daily morning tub bath in enough water to cover the body, using some good nonirritating soap. On hot afternoons, and again at bedtime, sponging with soda water and patting dry with a soft thin towel adds greatly to the baby's comfort and often sends a restless, fretful child to sleep.

THE BABY'S BED AND ROOM.

The baby *must have a bed alone*. When a baby sleeps with an adult it becomes overheated from contact with the body of the older person; the bed clothing is uniformly too heavy; the waste given off from the adult is either inhaled, or absorbed by the baby's skin; the adult in turning over frequently exposes the sweating baby to sudden cooling off. When sleeping with the mother, the temptation is strong to let the baby nurse in the night. This is bad for both mother and baby.

The bed may consist of a laundry or market basket, or a homemade bassinet, or it may consist of a well constructed iron crib bed in which the child can sleep until six years old.

The mattress should be smooth and firm and protected by a piece of rubber, well covered from contact with the child's body. The pillow should be very small and not too soft. If the mattress is well filled at the end, no pillow is necessary. The baby's head should be but little above the level of the rest of the body.

The covering should be very light in weight, a sheet for the early, hot part of the night, with a thin woolen blanket for the later, cool hours of the night.

The baby should be kept in the coolest, cleanest, airiest room in the house. Especially should he be kept out of the kitchen and out of any room which is being swept or dusted.

He should be allowed a great deal of freedom to roll about on a clean sheet on a clean floor or on a bed. A play pen is invaluable to the health and development of any child. To fasten a baby into a buggy on a hot and often a wet pillow and stand the buggy in a corner of a hot kitchen is a sure recipe for a fretful, cross, underdeveloped baby. Too often the

pacifier and flies are added to this prescription, and in this case the result is apt to be a sick baby.

KEEP CATS AND DOGS AND FLIES AWAY FROM THE BABY.

Adjust shades and windows so as to obtain the greatest possible circulation of cool air and shade from direct sun.

Keep the baby out of doors in the shade just as much as possible, away from dust and protected from flies.

Give him only playthings which can be washed in hot water and soap or boiled. Never pick a plaything up from the floor and give it back to the baby without so cleansing it. *All dust is full of harmful germs.*

SLEEP.

Babies normally sleep much of the time. The periods of sleep should be just as regular as the feeding and bathing. Make him comfortable and put him in the coolest, cleanest, freshest place in the house or yard. Fresh air is absolutely necessary to the well-being of the baby. If this is unattainable, the family should make every possible effort to send the baby and mother to the country during the period of extreme heat. Children who are not doing well frequently revive like wilted flowers when taken out of the vitiated air of the city.

THE BREAST-FED INFANT IN SUMMER TIME.*

Breast feeding insures the baby to a large degree against the diarrhoeal diseases. Too frequent feeding or overfeeding of even the breast-fed infant may produce vomiting, diarrhoea and fever. Boiled water should be given freely between nursings.

Overfeeding is as dangerous as underfeeding. Nearly every mother thinks that the cry of her baby is due to hunger. If the mother feeds the baby too frequently he is likely to cry and suffer from indigestion. This overfeeding leads to disturbed sleep at night, vomiting, and frequently to diarrhoeal stools. The management of overfeeding in milder cases consists in reducing the number of meals and limiting the time of the baby at the breast.

As great as is the danger of overfeeding, equally serious are the results of underfeeding at the breast. The breast milk may be insufficient in quantity, or it may be of poor quality. An underfed baby becomes restless, the skin becomes pale, he fails to gain in weight and cries almost constantly. If the baby is receiving insufficient food give him a bottle of properly diluted milk after each nursing at the breast. But keep on with the breast milk as long as there is any or until the proper time to begin weaning.

WEANING.

Do not wean the baby during the summer time if possible to avoid it.

Do not wean the baby because a friend or a relative advises it. If in doubt, consult a physician.

Nursing does not cause illness of the mother. There are only a few diseases which will interfere with maternal nursing. If the mother falls ill with a fever or becomes bedridden, weaning may be necessary. A

* Adapted from "Summer Care of the Baby."—American Medical Association.

tuberculous mother should not nurse her baby. A pregnant mother should wean the baby.

Most mothers can nurse their babies eight or nine months. If the weaning time should come during the summer time, the nursing period may be extended one or two months. Weaning should be gradual, not sudden. Babies do better when they become gradually accustomed to artificial food. This is best accomplished by replacing one breast feeding at a time by milk fed from a cup, or other food directed by a physician, or specified in an authorized diet list for a child of this age.

CARE OF SICK BABIES DURING HOT WEATHER.*

Even the mildest sickness during hot weather may, in a few hours, cause alarming illness and even death. Infants present a difference in the degree of resistance. Some are born strong and robust and resistant, while others show feeble strength, low vitality and impaired constitution.

During the heated term of summer the infant is subjected to greater danger from disease and infection than at any other period of the year. The expression, "summer complaint," is fully warranted by the seasonal recurrence of the disease.

Statistics show, too, that the height of the death rate is proportionate to the heat of the summer; thus, during a cool summer the death rate is relatively low, and during a hot summer relatively high.

Every effort should be made to have the baby perfectly well when hot weather comes; nose and throat defects, circumcision, skin troubles and any other defects, however slight, should be attended to, as every impairment lessens the resistance of the child in some degree.

Watch for the first symptom of illness. If the baby becomes feverish, vomits or has diarrhoeal stools, give a teaspoon of castor oil, wash out the lower bowel with a soft rubber ear syringe filled with warm oil or soap suds made with castile or ivory soap. Give nothing but boiled water until symptoms subside. If infant is not all right in a few hours, have a physician see it at once. Do not dose the baby with physics, patent medicines or home remedies suggested by the neighbors. Delay is dangerous when the baby's bowels get out of order in hot weather.

The baby's whole business in life is to digest his food and breathe plenty of oxygen. Give him just the food his stomach was made to digest and at regular intervals, and let his stomach have a rest between feedings. Give him clean, fresh air all the time, plenty of room to kick, unhampered by clothing, and he will be a happy, crowing joy to the household. These are simple things but they are fundamental.

ARTIFICIAL FEEDING OF INFANTS IN SUMMER.

When it is absolutely impossible to nurse the baby, and it is impossible to secure the services of a competent wet nurse, it must be fed a substitute for its mother's milk.

After much study and experimenting, the best medical and food authorities now believe that cow's milk, properly modified, furnishes the closest imitation to mother's milk, and comes more nearly to supplying all the elements needed for the baby's growth than any other food which has been used.

* Adapted from "Summer Care of the Baby."—*American Medical Association.*

Unfortunately, it is very difficult to keep milk free from harmful germs in hot weather. Pasteurizing does not kill all kinds of germs, and while boiling kills the germs it also alters some of the vital contents of the milk, so that a baby fed on nothing except boiled milk will soon exhibit certain signs of ill health. This effect can be in a measure counteracted by giving the baby a little orange juice every day.

The ideal food is fresh, clean, pure, cow's milk. In order to have this, the cow must be healthy, tuberculin tested, kept in clean quarters, milked by a healthy clean person, in clean utensils. Then the milk must be rapidly cooled to at least 50°, as germs grow very freely in milk at the temperature of summer air. It should be kept cold and touch nothing that has not been washed and scalded until it is prepared for the baby's use. Where the history of the milk is unknown or uncertain, it is safer to boil it for two or three minutes, no longer. Even certified milk sometimes becomes contaminated in handling. If there is any question whatever, it is safer to bring even certified milk to the boiling point. *Filthy, contaminated milk is unsafe, even after boiling.*

Use plain rubber nipples and wide-mouthed bottles which may be easily and thoroughly cleaned. Wash both bottle and nipple in warm soap suds immediately after using, thoroughly scald with boiling water and wipe with a clean towel. The nipples should be kept in a solution of soda water (one teaspoonful to glass of boiled water) and kept covered. The bottles should again be scalded before they are filled. It is better to sterilize and make up the entire day's feeding at one time and keep the bottles on ice, taking out one at a time as needed and stand it in a basin of hot water; shake occasionally and test the temperature by dropping a few drops into the center of the palm of the hand. *Never touch the nipple to your lips or anything else from the time it is boiled until it is put into the baby's mouth.*

If the baby leaves milk in the bottle throw it away and clean the bottle at once. Never warm milk a second time. Never keep milk warm in the thermos bottle or try to keep it warm at night by wrapping the bottle or keeping it next a hot water bag. Germs grow with astonishing rapidity in warm milk. Many a baby has lost its life from drinking milk thus poisoned.

Directions for modifying milk according to the age and conditions of the child should be obtained from the family physician. If this is impossible, write to Child Hygiene Division, State Board of Health, Topeka, for literature on the subject.

Clean Milk as a Diet.

One of the most important human foods is milk. It is practically the only food which contains all the elements required by man for his sustenance and constitutes his sole dependence throughout the first years of life. The health and well-being of young children depend more upon the proper food supply than upon any other one thing. Without an abundant supply of fresh, clean, wholesome milk it is impracticable, if not impossible, to rear healthy children. President Wilson says, "There is no more patriotic duty than that of protecting the children, who consti-

tute one-third of our population." In one form or another milk is used by practically every citizen. In proportion to the energy furnished, it is still one of our cheapest and most desirable foods.

In spite of these facts, milk may become, by improper handling, one of the most dangerous foods which we consume. The adulteration to which it may be subjected may detract from its food value, but is not likely to be injurious to health. The fact that milk may harbor bacteria of many kinds, some of which are dangerous and disease-producing, is of much more importance to the public. Milk produces a splendid culture medium for the development of all kinds of bacteria. It is practically the only medium outside the body in which disease germs are incubated.

If these organisms are of the disease-producing kind, serious epidemics may result, and milk has come to be regarded a frequent cause of typhoid fever, tuberculosis, scarlet fever, diphtheria, septic sore throat, the summer diarrhoea of infants, and numerous other conditions. In order to prevent the contamination of milk, every possible avenue of infection, from the farm to the consumer, must be controlled.

Proper milk standards have been carefully worked out by different milk commissions and are fairly well established. They are essential to efficient milk control by public health authorities. Their object is not only the protection of the milk consumer, but is necessary for the ultimate well-being of the milk industry itself. In the matter of public health administration, standards are absolutely necessary to furnish definitions around which the rules and regulations of city health departments can be drawn and the milk supply efficiently controlled. Public health authorities must see that the source of supply and the chemical composition of milk should correspond with the established definitions of milk as a food, but their most important duty is to prevent the transmission of diseases through milk. Milk may be graded and sold on grade the same as any other food product.

Grade (a)—raw milk. Milk of this class shall come from cows free from disease as determined by tuberculin tests and physical examinations by a qualified veterinarian, and shall be produced and handled by employees free from disease as determined by medical inspection of a qualified physician, under sanitary conditions, such that the bacteria count shall not exceed 100,000 per cubic centimeter at the time of delivery to the consumer from November 1 to April 1, nor more than 300,000 bacteria per cubic centimeter from April 1 to November 1. It should contain at least 3.25 percent of milk fat and not less than 8.5 percent of milk solids.

Cream should contain not less than 18 percent of milk fat nor more than five times the bacterial count of milk.

Milk containing a less degree of fat or solids or a higher bacterial count cannot be recommended as grade (a) milk.

Pasteurization is a simple process which does not injure milk and does kill the harmful bacteria. It consists in heating the milk to a temperature of 149° F. and keeping it at that point for twenty minutes. This is regarded as the safest milk which one can consume.

Boiling milk for five minutes is a simple and easy process to perform

and insures practically absolute protection against disease. Boiling produces changes in the color of the milk, interferes with the rising of cream, and brings about the development of a characteristic cooked taste. It also destroys certain vital principles which raw milk contains. The use of a little orange juice in the diet, however, prevents any injury from the loss of this vital principle. Boiled milk is not less digestible, but is more constipating than raw milk.

RULES FOR PRODUCING CLEAN MILK.

The cow stable should be used for no other purpose than for the keeping of cows, and should be well lighted, well ventilated and kept clean. If there is a loft above it must be tightly ceiled. The floors must be sound and gutters water tight. All manure should be removed at least once daily and disposed of so as not to be a source of danger to the milk nor furnish a breeding place for flies. There should be no handling of feed or bedding or anything that will create a dust in the barn for at least one-half hour before milking.

The milk house should be clean, light, well screened and used for no other purpose. It should have no direct connection with any stable or dwelling. The floors should be of cement properly graded and drained.

Cows should be tuberculin tested at least once a year by a competent veterinarian and should be free from all disease. Cows which react to the tuberculin test must be removed from the herd at once and their milk not used as raw milk. Cows, especially the udders, should be clean at the time of milking.

All employees connected in any way with the production and handling of milk should be personally clean and should wear clean outer garments. No one having any communicable disease should have anything to do with the handling of milk. The hands should be thoroughly washed and dried before milking, and milking should be done only with dry hands.

All milk vessels should be rinsed thoroughly in cold water as soon as milk is emptied from the vessel, before the milk has had time to dry upon them, and later the vessels should be sterilized by live steam or boiling water for at least two minutes. Small-top milking pails should be used. Immediately after the milk is drawn from the cows it should be taken to the milk house. Milk should not be transferred from one vessel to another in the milking stable. No receptacle containing milk should be left uncovered. On reaching the milk house the milk should be cooled with water to about fifty degrees, stirring the milk at least every ten minutes while cooling, if cooled in cans in a tank of water. Milk cools much better in a medium of similar density, like water, than it does in air.

RULES FOR SAFE MILK.

First. Healthy handlers.

Second. Healthy cows.

Third. Cleanly methods.

Fourth. Prompt cooling and maintaining a low temperature.

Fifth. Pasteurization.

**BE THE FELLOW THAT YOUR MOTHER
THINKS YOU ARE.**

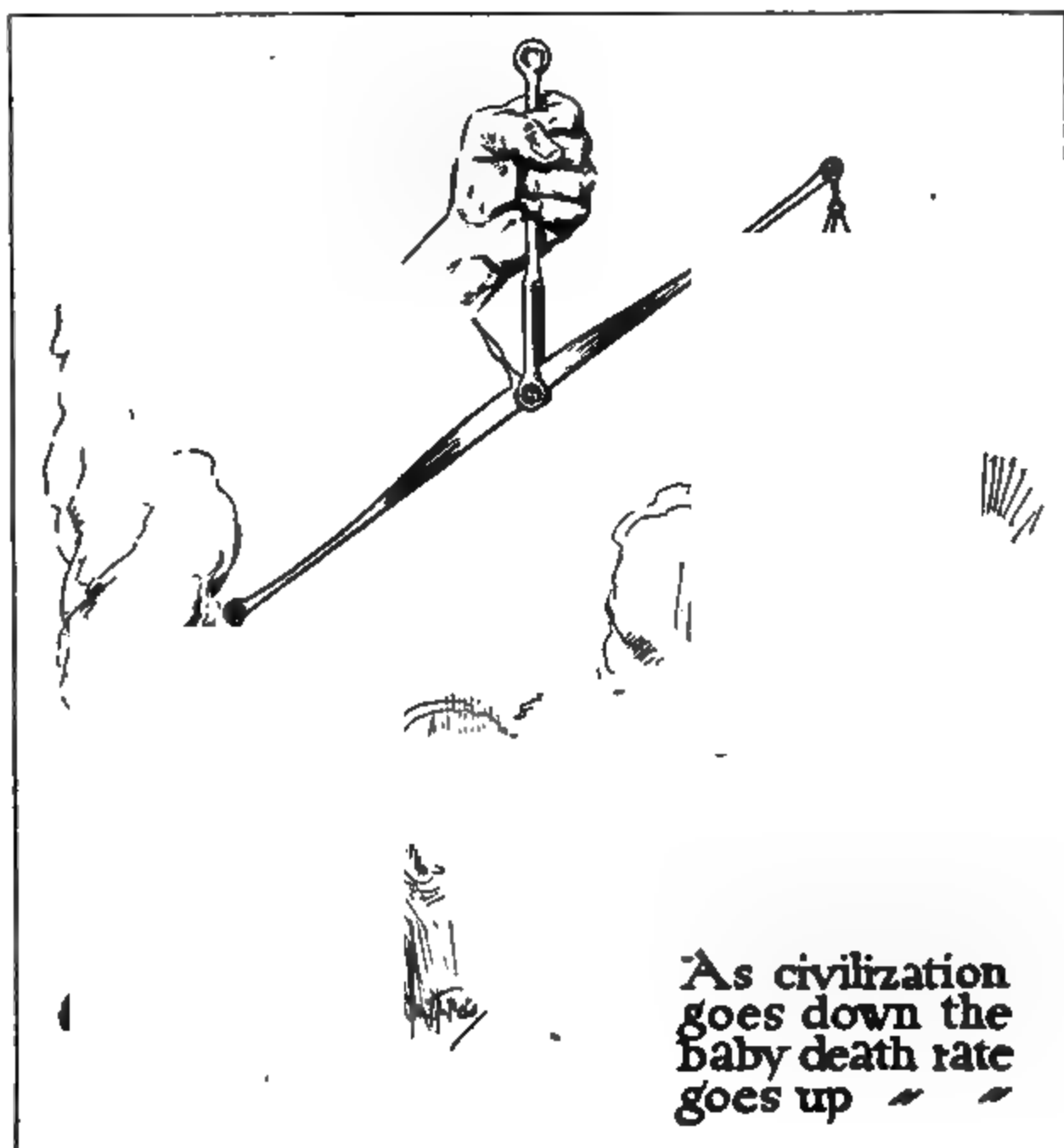
**While walking down a crowded city street the other day,
I heard a little urchin to a comrade turn and say:
"Say, Jimmie, don't yer know I'd be happy as a clam,
If I only was de feller dat me mudder t'inks I am.**

**"She t'inks I am a wonder, and knows her little lad
Would never mix wit' nothin' dat was ugly, mean or bad.
I often sit and t'ink how nice 'twould be—gee whizz,
If a feller was de feller dat his mudder t'inks he is."**

**So, folks, be yours a life of toil or undiluted joy,
You still can learn a lesson from the small, unlettered boy;
Don't try to be an earthly saint, with eyes fixed on a star—
Just try to be the fellow that your mother thinks you are.**

—Noodles Fagan.

HANDBOOK OF CHILD HYGIENE



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DIVISION OF CHILD HYGIENE
KANSAS STATE BOARD OF HEALTH
TOPEKA

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(COPY.)

THE WHITE HOUSE, WASHINGTON.

My Dear Mr. Secretary:

Next to the duty of doing everything possible for the soldiers at the front, there could be, it seems to me, no more patriotic duty than that of protecting the children, who constitute one-third of our population.

The success of the efforts made in England in behalf of the children is evidenced by the fact that the infant death rate in England for the second year of the war was the lowest in her history. Attention is now being given to education and labor conditions for children by the legislatures of both France and England, showing that the conviction among the Allies is that the protection of childhood is essential to winning the war.

I am very glad that the same processes are being set afoot in this country, and I heartily approve the plan of the Children's Bureau and the Woman's Committee of the Council of National Defense for making the second year of the war one of united activity on behalf of children, and in that sense a children's year.

I trust that the year will not only see the goal reached of saving one hundred thousand lives of infants and young children, but that the work may so successfully develop as to set up certain irreducible minimum standards for the health, education and work of the American child.

Cordially and sincerely yours,

(Signed) WOODROW WILSON.

Results of the Draft Examination.

"It is not an army we must shape and train for war, it is a nation."—*President Wilson.*

Report of the Provost Marshal General:

Total men called by draft	3,802,946
Total examined by local boards	2,510,706
Total rejected by local boards for physical reasons	730,756
Percentage of those examined rejected	29.11
Add 5.8 percent rejected at cantonments (estimated)	33.11

There is no disputing these figures. There is no sentiment attached to them; they are the cold facts obtained by military machinery. If one-third of American manhood between the ages of 21 and 31 is so physically defective as to be rejected for military service, what is to be expected of those under 21 and past the age of 31?*

The most superficial analysis of the causes for which men are rejected for service shows that more than 60 percent of these defects are preventable; that 30 percent are due to poor general physical condition, which can be remedied by proper feeding, by proper attention to personal hygiene and physical training; that another 30 percent are due to defective eyes and teeth, including bad mouth conditions; and that only 10 percent are due to neglected surgery.

An analysis of the purely preventable defects for which these men have been rejected shows that they are not acute or of recent occurrence, but that they are chronic conditions—that is, they have existed for years, many of them from early childhood. A little more attention to the physical needs of children, correction of their minor defects while they are still easily remedied, and proper health protection of the growing boys and girls would result in a very different health and efficiency analysis of the adult population.

With these figures, is there any further argument needed as to the value of child hygiene and of the necessity of pushing health protection to include all citizens?

* Dr. Eugene L. Fluke, *Journal of the American Medical Association.*

The Significance of the Declining Birth Rate.*

The study of American demography reveals a problem of the greatest possible moment. Changes have been progressing in the internal structure of our population which have, for the most part, escaped attention and which, if allowed to continue, will result in very serious national embarrassment. Conditions of war bring into relief the necessity for a vigorous and efficient population. It is not too much to say that the present tendencies in our national and family life are such as seriously threaten the development of groups in the population on which we must rely for vigor and efficiency in thought and action.

Superficially the growth of American population at present appears to be very satisfactory. Each census shows a marked increase in total population. Our birth rate is probably about 25 per 1,000, and the death rate for the entire country not far from 15 per 1,000. The difference between the birth and the death rate, the rate of natural increase, is about 10 per 1,000, or one percent annually. On the surface this is a very good showing. It is when we observe the varying tendencies in the several groups and in the several sections of the country that the real situation becomes apparent.

The marked increase in our total population is in large measure the result of two factors: (1) immigration, and (2) a high rate of increase among the foreign-born rather than among our native stock. This is shown by the constantly decreasing proportion which the native whites of native parentage form of the total white population. This decreased from 67.8 percent of the whole in 1870 to 60.5 percent in 1910. In the New England states the proportion of native white stock decreased from 52.3 percent of total in 1890 to 40.3 percent in 1910. In the Middle Atlantic states the native white stock decreased from 51.8 percent in 1890 to 44.5 percent (or less than half) in 1910.

Native stock is playing an even smaller part in the composition of the total population and a very definite tendency toward depopulation has already fastened itself upon a large part of the native stock of the country.

There has been a marked and continuous reduction in the general birth rate in the United States for a period of years. In the absence of comprehensive birth statistics, such as are available for European countries, we may arrive at this through computing the number of children under five years of age per thousand women in the child-bearing ages, namely, 15 to 44 years, inclusive.

Professor Willcox in a recent paper has shown that this proportion has decreased about 50 percent in the course of the last hundred years. At the beginning of the century there were 976 children under five for every thousand women between the ages of 15 to 44 years, whereas in 1910 the number was only 508 per thousand women at these ages. Dur-

* From an address delivered by Louis I. Dublin before the American Association for Advancement of Science, December, 1917.

ing the 60 years between 1850 and 1910 the number of children under 5 per thousand women at the child-bearing ages decreased in the United States by 191, or at an average of 32 in each decade. The rate of decline in the recent decades has been so rapid that Professor Willcox suggests, amusedly, that if it were continued over a period of a century and a half, which is comparatively short time in the life of a nation, there would be no children at all at the end of that time.

This reduction in birth rate has been severely selective and has affected mostly our native stock, and among these especially the groups who are socially and economically best fitted to bear and rear large families to maturity.

A tabulation of the 1910 census returns shows that women of native parentage who had been married from ten to twenty years showed an average of 2.7 children, while the corresponding group of foreign-born women averaged 4.4 children per married woman. Thirteen percent of the group of married women of native stock had borne no children, while only 5.7 percent of the foreign-born group were childless.

Additional evidence of the selective character of the declining birth rate is presented in special studies on the size of families of college graduates and men of science. The birth rate among graduates of Harvard and Yale during the decade between 1850 and 1860 was 3.25; for the decade 1880-'90 it was a little over 2. The number of children per married-woman graduate of Smith College was 1.3; of Vassar 1.6; of Bryn Mawr 1.7; of Holyoke 1.8. The ratio of children per graduate for all of those colleges is less than one, due to the fact that less than 50 percent of graduates of women's colleges marry. According to Professor Cattell's study of the families of 643 American men of science, they had come from families averaging 4.7 children, while their own families averaged only 2.3 children.

Allowing for sterile marriages, child mortality, and failure to marry, it is estimated that productive unions must average at least four children in order to maintain the population at a stationary figure. It will become readily apparent that the best blood of America is being constantly thinned out and replaced by a stock of a different order.

Remedy: 1. Inculcate the ideal into our educational life that our intellectual, economic and social advancement must be carried forward not only as tradition, but especially in terms of new, vigorous and worthy personalities.

2. Reconstruct our higher education for women and make it provide primarily an adequate conception of and preparation for the vocation of motherhood.

3. State reward, both by esteem, and by subsidy when necessary, of all healthy and eugenically sound families which reach or exceed the normal size.

Infant Mortality.

The term infant mortality, used technically, applies to death of babies under one year of age.

The infant mortality rate is the statement of the number of the deaths of such infants in a given year per live 1,000 births in the same year.*

The infant mortality rate is considered the most sensitive index we possess to social welfare. It reflects at once conditions which improve or interfere with the normal health or life of the community. As conditions which make for a normal family and community life are improved, the infant death rate decreases. When these conditions are disturbed, the rate correspondingly increases. The infant mortality rate, therefore, may be taken as the barometer of the social welfare of the community.

The state of Kansas enjoys a relatively low infant mortality rate compared with other states. According to the birth statistics, Bureau of Census, for the birth registration area for 1915 (the latest figures available), the highest state infant mortality rate was 129 and the lowest 69.

The division of Vital Statistics of the State Board of Health was established in July, 1911. The Division of Child Hygiene was established in July, 1915.

The Kansas infant mortality rates for the period for which records are available are as follows: 1912, 74; 1913, 88; 1914, 77; 1915, 70; 1916, 68.8; 1917, 77.

In 1916 there were 41,163 births reported and 2,832 deaths of babies under one year of age—an infant mortality rate of 68.8, the lowest for the six-year period.

In 1917 there were 38,611 births reported and 3,005 deaths—an infant mortality rate of 77.

The total number of births for 1917 was 2,552 less than for 1916. The total number of baby deaths for 1917 was 173 greater than for 1916.†

The infant mortality rate proper does not as yet include stillbirths. The number of stillbirths reported for 1916 was 1,328, and for 1917 was 1,203. Stillbirths have not shown any appreciable decrease during the six-year period, but are rather on the increase. This increase may be relative rather than actual and may be due to improvement in birth and death reporting.

Of the 2,832 infants under one year of age who died in 1916, 1,462, or slightly more than half, died of congenital malformation, premature birth or congenital debility. Of the 3,005 deaths of infants under one year who died in 1917, 1,394 deaths are charged to these causes.

If we add to these figures 1,328 reported stillbirths in 1916, and 1,203 in 1917, we have as a total for the two-year period 5,397 babies *who never had a chance to live.*

* An exact method of determining the infant mortality rate would require a study of babies born in a given year who died before reaching their first birthday, but for practical purposes the infant mortality rate is determined as above.

† Whooping cough, measles and broncho-pneumonia were principally responsible for this increase of 173 deaths. Broncho-pneumonia, which is a secondary infection following measles, whooping cough, scarlet fever and other children's diseases, alone was responsible for 107 of the 173 increase.

These figures do not take into consideration the indefinite number of infant lives lost through intrauterine mortality. There is no doubt but that the number of miscarriages and abortions, if they were reported, would equal if not exceed both the stillbirths and congenital mortality.

This represents an enormous waste. In dollars and cents alone it commands attention. Allowing an average minimum of \$50 expense for each of the 5,387 nonproductive confinements, it represents a cash loss of at least \$269,350. The loss in cash is the smallest item. It is not possible to estimate the cost in suffering to the mother and her resulting ill health. Frequently she must even lose her own life. This economic and social waste demonstrates the importance of conserving the child life of the commonwealth.

Studies in Infant Mortality.*

Studies in infant mortality have been undertaken by the National Children's Bureau in various communities of the United States. These communities have varied greatly—city and rural, industrial centers, and suburban residence districts.

While there is a great difference in the infant mortality figures obtained between a city and a rural district, or between an industrial center and a wealthy suburban residential district, yet in all communities certain factors in every instance are found to influence the infant mortality rate.

Complete statistical data on the relation of these factors to infant mortality is not available for Kansas. The figures and percentages obtained by such an investigation (if it were possible to undertake it) would no doubt vary widely from figures obtained in other parts of the United States, just as they would vary widely in the various communities of Kansas. However, the *relation* of these factors to infant mortality would not be altered.

For practical purposes the results of these investigations conducted elsewhere may be taken as an indication of the lines along which public-health work must be directed if the infant mortality rate of Kansas is to be reduced to the minimum.

FATHERS' EARNINGS AND INFANT MORTALITY.

The infant mortality rate shows a marked and almost regular decline as the father's earnings become larger. For the group of babies in which the father's earnings are less than \$450 per annum, the infant mortality rate is 242.9 per 1,000 live births, while in the next group, in which the father earns from \$450 to \$549, the rate is 173.6. It rises very slightly in the next class, \$550 to \$649, to 174.5, and thereafter drops steadily with each advance in economic status. The rate, however, does not fall below 100 until the father's earnings reach \$1,050 or more. Babies whose fathers earn \$1,250 and over per annum have a death rate of only 58.3.

* Statistical tables and data from "Studies in Infant Mortality," National Children's Bureau.

HOUSING AND INFANT MORTALITY.

Low wages and small income for the family necessarily result in cheap rents and poor housing conditions. Bad housing and insanitary environment are accompanied by high infant mortality rates.

The homes of 1,510 babies visited had street frontage; 129 had alley frontage. Conditions in and around alley and rear houses were found to be almost uniformly bad, and the infant mortality rate for babies in such houses was high. Live-born babies in these houses numbered 123, or 7.9 percent of the whole number. These babies died at a rate of 227.6 per 1,000 live-births, while the death rate among babies in homes with a street frontage and a good sanitary environment was only 159.4.

ROOM CONGESTION AND INFANT MORTALITY.

Room congestion has a direct influence on the infant mortality rate. Of the live-born babies included in this investigation 42.5 percent came from homes in which the number of persons, exclusive of the baby, averaged less than 1 per room; 46 percent in which the average was 1 but less than 2; 6.8 percent from homes in which the average was 2 but less than 3; and 1 percent came from homes in which the average number of persons per room was from 3 to 5.

The infant mortality rate showed a steady increase according to the number of persons per room. Where the average number of persons to the room was less than 1, the infant mortality was 123.3; where the average was more than 1 but less than 2, the infant mortality rate was 177.8; where the average number of persons to a room was 2 or more but less than 3, the infant mortality rate was 261.7.

EMPLOYMENT OF MOTHER DURING PREGNANCY AND INFANT MORTALITY.

Work during the year before baby's birth exerts a marked influence on the infant mortality rate. Nearly half of the entire number of babies included in the investigation had mothers who had engaged in gainful employment at some time during the year previous to the baby's birth. The occupations included 504 cases where the work was away from home, 427 of which consisted of employment in the textile mills and 47 in other factories.

Babies of mothers gainfully employed during the year preceding the baby's birth had a mortality rate of 199.2, whereas the rate for babies of mothers who were not so employed was 133.9. The rate for babies of mothers whose gainful work was in the home was 149.8; for babies whose mothers worked away from home, 227.5.

THE EMPLOYMENT OF MOTHERS DURING PREGNANCY AND STILLBIRTHS.

The results upon stillbirths of a mother's work during pregnancy show that mothers gainfully employed have a higher percentage of stillbirths than all mothers, or than those mothers not gainfully employed. The highest percentage occurs among mothers gainfully employed away from home, and the lowest among those gainfully employed at home.

EMPLOYMENT OF MOTHER DURING FIRST YEAR AFTER BABY'S BIRTH AND INFANT MORTALITY.

The employment of a mother during the first year after the baby's birth exerts an influence on infant mortality, especially if complicated by low wages and insufficient food and rest. A mother's intelligence and care are also reflected in the infant mortality, although the mother's ignorance often is a consequence of her low wages and of being compelled to work at an early age.

The employment of a mother during the first year of her baby's birth directly interferes with breast feeding, and the lack of breast feeding in turn raises the baby death rate. It is impracticable for a mother to be gainfully employed away from home and to breast feed a young infant. *A baby may be bottle fed at six months with comparative safety. He may be bottle fed at three months if extreme care is exercised. To put a baby under three months of age on a bottle is an exceedingly hazardous undertaking.*

BREAST FEEDING AND INFANT MORTALITY.

The chance of survival for babies deprived of breast milk at an early age is decidedly less than that for babies nursed for a longer period. A comparison of the breast fed and artificially fed babies from any month up to its ninth month reveals the fact that the percentage which fails to survive infancy is from two to five times higher among the artificially fed babies than among the exclusively breast fed.

LARGE FAMILIES AND INFANT MORTALITY.

There is a higher mortality in the larger families. Combinations of four or less pregnancies are, for convenience, considered as Group 1, while the combinations of over four are designated Group 2. The differences in rates in the two groups are notable. The infant mortality is much lower for the first than for the second group.

	REPORTABLE PREGNANCIES FOR MARRIED MOTHERS.	Infant mortality rate.
<i>Group 1:</i>		
2 or less.....		108.5
3 or less.....		124.7
4 or less.....		119.2
<i>Group 2:</i>		
Over 4		171.5
Over 5		178.8
Over 6		183.9

ILLEGITIMACY AND INFANT MORTALITY.

Of the 1,551 babies included in this investigation, 34, or 2.2 percent, were born out of wedlock. Nine of the 32 illegitimate babies born alive died during their first year.

MATERNAL MORTALITY.*

The sickness or death of the mother inevitably lessens the chances of the baby for life and health. A large proportion of the deaths of babies occur in the first days and weeks of life. These early deaths can be

* From "Studies in Maternal Mortality," by the National Children's Bureau.

prevented only through proper care of the mother before and at the birth of her baby.

In 1913 in this country at least 15,000 women, it is estimated, died from conditions caused by childbirth; about 7,000 of these died from child-bed fever, a disease proved to be almost entirely preventable, and the remaining 8,000 from diseases now known to be to a great extent preventable or curable. Physicians and statisticians agree that these figures are a great underestimate.

In 1913 childbirth caused more deaths among women 15 to 44 years old than any disease except tuberculosis. The death rates from childbirth and from child-bed fever for the registration area of this country are not falling; during the 13 years from 1900 to 1913 they have shown no demonstrable decrease. During that time the typhoid death rate has been cut in half, the death rate of tuberculosis markedly reduced, and the death rate for diphtheria reduced to less than one-half.

The low standards at present existing in this country result chiefly from two causes: (1) General ignorance of the dangers connected with childbirth, and of the need for proper hygiene and skilled care in order to prevent them; (2) difficulty in the provision of adequate care due to special problems characteristic of this country. Such problems vary greatly in city and in country. In the country the inaccessibility of skilled care, due to pioneer conditions, is a chief factor.

Improvement will come only through a general realization of the necessity for better care at childbirth. If women demand better care physicians will provide it, medical colleges will furnish better training in obstetrics, and communities will realize the vital importance of community measures to insure good care for all classes of women.

While the figures given in this report are a startling indication of the great number of deaths in childbirth occurring in various parts of the country, no estimate can be made of the number of mothers who survive, only to suffer ill health which limits or defeats the well-being and happiness of their households. Nor do they include the deaths of women from kidney, heart and liver diseases, which are aggravated by child bearing to such an extent that the conscientious physician warns against pregnancy in such diseases.

Reduction of the Infant Mortality Rate.

Studies in infant mortality leave no doubt that certain factors invariably increase infant mortality. Among them are poverty (low wages), the employment of pregnant and nursing mothers in gainful occupations, too large families, illegitimacy, low mentality of the parents inseparably associated with pauperism and illegitimacy, poor housing and insanitary surroundings, impure milk and bad food, and a lack of adequate public health protection.

Ignorance, disease and poverty sum up the principal causes of infant mortality. A program for the reduction of infant mortality to its lowest irreducible minimum must take cognizance of these principal factors.

To control them properly will require fundamental changes in our educational, social, economic and political life.

But before such changes may be effected and for the immediate present certain methods are being furthered which have proved their worth in the reduction of the infant mortality rate and in improving the health of all children. These efforts are recognized by the boards of health as an important part of their necessary program for public health protection.

PUBLIC HEALTH DOCTORS AND NURSES.

"An epidemic prevented is better than two epidemics cured" is the modern paraphrasing of an old motto. This also is the spirit of the new awakening in public-health matters, which is crystallizing itself into a demand on the part of all citizens that they and their families be protected from communicable diseases and that they be accorded the very best of opportunities for life, health and happiness.

The organized effort to protect public health has grown to such proportions as to demand the entire time of men and women who are especially qualified to serve in this capacity. Thus a new branch of preventive medical activity has been evolved, requiring public-health nurses, public-health physicians, and full-time health officers.

The acquisition of a public-health nurse is the first step in efficient public-health work. Especially is this true in regard to work for children. A nurse is necessary to the proper conduct of a child-hygiene station, and her instruction is indispensable to the proper education of mothers. Nurses giving prenatal instructions to mothers have made wonderful records in saving mothers' and babies' lives and great improvement in the health of both. Public-health nurses are invaluable in obtaining thorough physical inspection of school children, assisting at school clinics, preventing outbreaks of disease among school children, and for follow-up work in the home.

The trained public-health physician is no less important than the public-health nurse. The custom has been to employ as city and county health officers busy doctors who, in addition to their regular practice and for a small yearly stipend, have been attending to the quarantining of communicable diseases. This quarantining of communicable diseases is many times more expensive and less efficient than searching out the causes of epidemic diseases and preventing them altogether. To do the latter work effectively requires the services of a trained public-health physician devoting his whole time exclusively to that purpose.

Proper public-health protection pays.

PURE MILK.

Milk has no substitute in the diet of a child. Milk is the one indispensable food for children.

The results of underfeeding and of the indiscriminate use of food substitutes in feeding children, as a result of the war, are being startlingly shown abroad and are beginning to be evident in American cities. The nourishment of its children is plainly one of the first duties of a nation. And since milk and milk products are a vital necessity for children, for

nursing mothers and for the sick and wounded, the safeguarding of the milk supply is a matter of first concern.

The character of the milk supply for cities in Kansas is controlled by city ordinance. A properly drawn ordinance should require: Healthy cows; clean dairies and premises; clean operators, free from communicable disease; facilities for hot water and for sterilizing all milk utensils; clean and well-drained and screened milk houses; and proper provision for immediately cooling milk and keeping it cool until delivered. To determine whether milk is produced under such conditions requires frequent examination of milk and plant, and laboratory tests.

In cities where the milk supply is not so safeguarded the parents of small children may well visit the dairy from which they receive their supply in order to assure themselves that the milk is cared for under clean and sanitary conditions and cooled immediately. Sanitary standards for the production of safe milk and models for city ordinances may be obtained free on request to the State Board of Health, Topeka.

But a proper safeguarding of the milk from a sanitary standpoint does not obviate the difficulties arising from the increased cost of feed and labor necessary to produce milk, and the failure of the average income to keep pace with the ever-increasing high cost of living. Milk is one of the food products which probably can be handled best and cheapest by a central receiving station and pasteurizing plant, and by a single system of distribution. The production of a clean, safe and abundant supply of milk at a price within the reach of every family is a serious immediate problem facing many Kansas cities.

PRENATAL CARE.

The first month of life is the period of the highest infant mortality rate. In the United States registration area for 1915, 46 percent of the deaths under one year of age occurred during the first month, 32 percent during the first week, and 16 percent during the first day.

Obviously this high infant mortality rate cannot be prevented by measures instituted *after the baby is born*. Instead, this condition presents an urgent necessity for preventive health measures before and after the baby is conceived. Proper selection of stock and right care before birth has long been recognized as a cardinal principle by animal breeders, but it is only within the past few years that the same principles have been generally recognized as applying to human beings.

Prenatal care offers an opportunity to the city and state to direct its health protection measures to the "production plant" of its citizens rather than to the "repair shops." It will cost much less in time and money to *prevent* illness and deaths of babies than it will to pay for them—and, besides, we would have the babies left. A summary of reports of various experiments has abundantly proved the worth of prenatal care.

Prenatal care:

Reduces the baby deaths during the first year by at least one-half.

Reduces the number of stillbirths one-half.

Reduces the number of miscarriages and premature births.

Reduces greatly the sickness and death of the mothers—puerperal eclampsia and septicemia (convulsions and childbed fever) being reduced in one experiment 80 percent.*

Produces healthier babies of increased weight.

Produces a greater number of normal deliveries.

Increases the possibilities of the mother nursing her baby, thus giving the baby a better chance for its life.

Affords comfort to the baby, and peace to the mind of the more or less sick and harrassed mother.

Make possible a trained attendant at every childbirth.

Method and cost. The method of administering prenatal care is simple and may be undertaken by any thoroughly trained nurse. The best results are attained when she is able to watch her patient throughout the entire period of pregnancy. The nurse visits her patients every week or ten days, or oftener if necessary, keeping under close supervision the patients' diet, exercise, hours of work and rest, hygiene and health, including periodic urinalysis. The nurse immediately refers to the patient's doctor any unusual or untoward symptoms which her trained eyes may detect.

Where the distances between patients are not too great, a nurse by carefully systematizing her work may make from 80 to 100 visits a week. Averaging the difficult cases, which may require daily visits, with those in which the expectant mother is in exceptionally good health, requiring visits only every second or third week, the nurse can care for an average of more than 100 patients.

The public health nurse's salary is about \$1,000 per annum, with an allowance of several hundred dollars for traveling expense and supplies. Experiments in prenatal care have demonstrated that where the nurse can be kept comfortably busy the expense averages about \$3 per patient. Fewer patients would raise the average cost, but in no community, except perhaps the sparsely settled rural districts or where the roads are impassable, would the service exceed \$5, a sum which most expectant mothers would pay cheerfully as a wise investment.

County commissioners and boards of health, public-health nursing associations, women's clubs and health societies may profitably employ or underwrite the salary and expense of a nurse, so that every sizable community in the state may have at least one prenatal nurse to prevent sickness and loss of life among the babies and mothers.

INFANT WELFARE STATIONS.

The surest test of a child's proper growth and development is the steady increase in weight, evidenced by regular weighing. A baby should be weighed every week until he is one year old, and then every few weeks or month until he is two and one-half or three years old. After that age he should be weighed at least twice yearly and also given a thorough inspection so that any minor irregularities of teeth, posture, nutrition or other organ, or function, may be remedied promptly.

The ordinary spring baby scales are scarcely accurate enough for this purpose, especially as the baby becomes older and heavier. Scales

* Women's Municipal League, Boston.

with a platform and beam, similar to the grocer's counter scales, and fitted with a pan or basket, are much more satisfactory. But these scales are comparatively expensive, and not all homes are equipped with them.

To overcome this difficulty a group of mothers may request the county health authorities to provide proper scales and to place them conveniently at the county seat. If the city or county employs a public-health nurse, she may meet with the mothers one afternoon a week, assist them with the weighing, inspect the babies, and refer those who need medical attention to their doctors. The nurse may also advise the mothers about the care and feeding of the children and about the health of themselves and their families.

Location. By experience it has been found that stations in rest rooms of dry-goods stores are very well attended. The mother, incidental to her shopping, can have her baby weighed and inspected by the nurse, thus saving her a special trip for the purpose. A public rest room also offers a good headquarters for a welfare station. Many country women visit these rooms. Incidentally they may become interested in having their children examined when otherwise they would not go to a station in another location.

The public schoolhouse, especially in those districts in which the infant mortality rate is high, is another good location for a child-hygiene or infant-welfare station. In most school buildings a room may be found which can be used for this purpose one-half or one day each week and in which the records and necessary equipment may be kept. This plan has the approval of the state department of education. A room in the city building or other public building may serve. But the farther the mother is compelled to go in order to reach the station the more difficult it is for her and the less likely she is to attend.

Equipment. The furnishings of a station should be of the simplest and the plainest kind. Each should be equipped with a good pair of scales and suitable pan or basket for weighing the babies, a measuring rod and tape line, a table, sufficient chairs and suitable records, and always with paper towels and sufficient linen for sanitary standards. If funds and space permit, a table and utensils for modification of milk, blackboard, exhibit of layette, and a model nursery may be provided.

BETTER BABY EXAMINATIONS OR CHILDREN'S HEALTH CONFERENCE.

The infant-welfare station makes possible the periodic examination of large numbers of babies. Where there are no such stations established these examinations may be conducted singly and privately, one baby at a time, in the doctor's office, or they may be conducted in groups publicly as Baby Day or Better Babies Week.

Examination cards, instructions and literature necessary to the conduct of a baby examination are furnished free by the Kansas State Board of Health, Division of Child Hygiene.

BIRTH REGISTRATION TEST.

Births are reportable by law, and there is a heavy penalty for failing or refusing to report them. However, birth reports are sometimes overlooked or forgotten. It is obvious that if all the deaths of a community

are reported and that only part of the births are reported, that community is being charged with a higher infant mortality rate than it merits.

Correct birth reports and birth certificates are becoming increasingly important. A certificate of birth may be required to prove descent, to prove inheritance of property, to obtain a pension, to enter school, to obtain employment, for civil service, to establish ability to make contracts, to enter the professions, to join the army or navy, for court purposes, to marry, and for other purposes.

A careful checking of all the births in a community is not only a valuable service to the community itself, but it may be of inestimable service to the citizens born within its limits.

EDUCATIONAL LITERATURE—KANSAS MOTHERS' BOOK.

While a careful birth registration test will reduce the *infant mortality rate*, it will not reduce the *actual number of baby deaths*. This can be done by improving the health conditions of a community, and especially by reaching the mothers with educational literature and personal instruction.

The Kansas Mothers' Book, issued by the Kansas State Board of Health, Division of Child Hygiene, contains practical information regarding child-bearing and child-rearing in simple and concise language. It discusses also the public-health phases of child hygiene and welfare, so that the mother may understand and coöperate with the various agencies of the state to which she may appeal for service.

MOTHERS CONFIDENTIAL REGISTRY FOR PRENATAL LETTERS.

Important factors influencing a child's health and life begin before he is born. To be born well is a considerable part of the battle. When conception occurs the "gates of gifts" to the child are closed. The parents gave their child *what they were*, not what they would like to be. From this time on they can only conserve the life and provide the best possible environment for their child's development, both before and after birth.

Expectant mothers are urged to enroll in the Mothers' Confidential Registry, Division of Child Hygiene, Topeka, giving name and address and the date of the expected confinement. They will receive, without charge, a series of nine prenatal letters and the pamphlet "Prenatal Care," issued by the National Children's Bureau.

When the birth of a baby is reported a blank certificate and a Kansas Mothers' Book will be sent, provided the mother has not already received one. Expectant mothers and mothers of children may also write the Division of Child Hygiene regarding the many perplexing questions associated with child-bearing and child-rearing.

CARE AND TREATMENT OF DEFECTIVE, CRIPPLED OR DEPENDENT CHILDREN.

It is not alone the children of parents in poor circumstances who need physical or medical attention. A considerable percentage of *all* children need dental, medical, hygienic or corrective treatment. If not remedied these apparently simple physical ailments of childhood sometimes seriously interfere with a child's growth and development, and his health and

efficiency in later years. The results of the draft examination in the United States abundantly attest this fact.

It is hoped that the significance of the neglect of physical ailments of children may be brought to the attention of every parent or guardian of a child. By reporting such children to the State Board of Health, Division of Child Hygiene, an effort will be made to advise parents or guardians as to the appropriate kind and suitable source of treatment.

COMMUNICABLE DISEASE CONTROL.

The common diseases of childhood—measles, whooping cough, and so forth—which are erroneously thought to be comparatively harmless, are responsible for the deaths of thousands of children annually. *The younger the child contracts one of these diseases, the greater the chances that he will die, for the younger the child, always the higher the mortality rate.*

While these diseases do not always kill, they are likely to cripple and maim. They are responsible for much of the deafness, poor eyesight and illhealth of adults. Thus the conservation of child life and the health of the adult depend to a considerable degree upon the control of these diseases.

Every epidemic has its starting point in some unrecognized communicable disease, or from the delayed report and the consequent delay of quarantine or other public-health protection measure. The efficiency of a health department depends upon its means and ability to isolate promptly and to prevent the spread of contagion.

Physicians are required to report all communicable diseases to the health officer. But many cases occur where no physician is in attendance. In such cases the householder is charged with the responsibility of reporting. If he fails to do so his neighbors ought to report the cases in justice to the health of their own families.

Public health and welfare demand that every person, to a certain extent, shall be a deputy health officer and sanitary inspector. The matter of proper public-health protection is a matter of good citizenship and an exemplification of the Golden Rule.

CHILD CONSERVATION HOUSE-TO-HOUSE CANVASS.

There is no other method of putting literature into the hands of every mother and expectant mother and of checking all births and epidemic diseases except by the house-to-house canvass. Clubs, Sunday-school organizations, senior high-school students, colleges and other groups interested in public health and child hygiene are invited to undertake this survey in their home precincts. This canvass is made by voting precincts, and wherever possible, under the direction of a county chairman, woman's committee, Council of Defense. Blanks for this canvass, press material and all necessary literature are furnished by the State Board of Health, Division of Child Hygiene.

SCHOOL HYGIENE.*

The Cost of Neglect.

A PROBLEM IN SCHOOL ARITHMETIC.

Enrollment in grade schools, total for year 1916 ¹	898,288
Expenditures for grade schools, total for year 1916 ¹	\$13,858,750.86
Average cost of school year per pupil enrolled.....	\$33.54
Pupils failing to make a grade each year, average, city and country ²	14.3%
Annual number of pupils failing to make a grade.....	56,955
Annual loss caused by pupils repeating grades.....	\$1,910,270.70

A saving of this amount of money will not be represented by less money being spent on the schools, but by obtaining value received for money now being wasted. This first cost of retardation, the loss of school money alone if it might be so utilized, would provide:

One school nurse (salaries and expenses) for each thousand grade pupils and a similar amount for school physicians and school clinics.

One teacher of physical education for each thousand grade pupils, and similar sum for playground and gymnasium equipment.

One special teacher for ungraded classes for each thousand grade pupils, and for the necessary trained mental examiners.

Those special teachers would enable normal children to keep up with their grades and assist the supernormal children to go ahead as fast as their ability would permit. They would also relieve the classroom of the drag of the subnormal and feeble-minded children and give them the rudiments of training which, supplemented by special institutional training,³ would make them more or less self-supporting and self-respecting citizens.

* The subject of School Hygiene will be taken up in a later issue of the bulletin of the Kansas State Board of Health.

1. From the twentieth biennial report of the state superintendent of public instruction of Kansas for the year ending June 30, 1916.

2. Total retardation—pupils one year or more behind the proper grade for their age—in cities, 30.6 percent; in country, 39 percent. Investigation conducted by School of Education, University of Kansas, school year ending June, 1916.

3. This estimated cost of preventing retardation does not include the cost of caring for the 2 percent of school children who are recognized as feeble-minded. Such care cannot properly be charged to the public school funds. Funds for the care of feeble-minded in this state are appropriated to the departments of charities and corrections administered by the Board of Administration.

Physical Examination of School Children.

The schools are spending millions in educating or trying to educate children who are kept back by ill health, when the expenditure of thousands in a judicious health program would produce an extraordinary saving of ill health and an increase in economy and efficiency. A dollar spent in wise, constructive effort to conserve a child's health and general welfare will be more fruitful for the child and for the general good than a hundred times that sum delayed for twenty years. The principle of thrift in education finds its first and most vital application in the conservation and improvement of the health of the children.

Every school child should have a health examination once a year. More frequent examinations should be provided for individual pupils who need special attention. All health examinations and attention in rural and in city schools should be under the supervision of regularly appointed school physicians thoroughly trained for their work. *There should be for every child a health as well as a scholarship record which accompanies him through his public school career. This should be a part of the records of the school which the child is attending.*

The simpler tests of vision and hearing can be made by the teacher as well as the routine morning health inspection. Capable teachers can easily learn simple methods of routine physical examination. The more detailed examination is the work of the physician. But where even the simplest of physical examinations may not be undertaken, every teacher may take the height and weight of each child. This height and weight and their relation to each other and to the child's age are a rough index to his physical condition.

Standard height and weight cards, also blanks for complete physical examination of school children, will be sent free on application to the State Board of Health, Division of Child Hygiene.

Height and Weight Tests of School Children.*

An adult may be underfed for a long period without serious results, but a child if undernourished will never become as strong and capable an adult as he might have been. The detection of malnutrition requires no expert medical knowledge. The weight of the child and his rate of gain tells the story.

Malnutrition exists among school children to an almost incredible degree. A recent survey in New York shows that of a million school children in that city, approximately 150,000 are stunted in their growth, retarded from one to three years in height and weight. In other parts of the country malnutrition prevails probably to even a greater degree, as New York has shown more than ordinary interest in the welfare of her school children and has made relatively large appropriations for the protection of the health of her children. This degree of malnutrition (proba-

* Adapted from publications of Child Health Organization, 289 Fourth avenue, New York City. Free literature sent on request.

bly one-third of all school children) extended into adult life would cause every one of these individuals to be rejected from the army as physically unfit.

Malnutrition to this degree exists because there has been no effective physical inspection of school children, which would have located it and steps therefore would have been taken to correct it. Undernourished children may look well when dressed, thus they are considered to be well. But a careful inquiry into their condition would reveal that they are pale or even anemic, that they are listless and inattentive to their studies, and that they are easily fatigued both physically and mentally. When such children fall behind in their studies they are considered lazy, and pressure at home and school is increased. Thus a vicious circle is established which further increases the difficulty. These children in later life often become physical and nervous wrecks.

The first step in combating malnutrition among school children is to locate individual cases. This requires no expert medical knowledge. A pair of scales, a tape measure and a chart of heights and weights are all that is necessary. If the school does not possess a pair of scales or cannot buy them, the children will readily go to the grocers or butchers to be weighed regularly for the fun of it, especially if a game is made of the proceeding and a little rivalry or competition is arranged for them. The children will also enter heartily into the idea of bringing themselves up to normal weight and condition as a part of their patriotic duty as good citizens.

Having located the undernourishment, the next thing to do is to discover the causes. A sympathetic physician will be of inestimable service at this point. In almost every school district one or more doctors may be found who will donate their services for the necessary physical examination. This examination will show from three to nine defects in every undernourished child, and often as many in those of normal weight. The defects of most serious concern to the child's condition are those that interfere with respiration, enlarged or diseased tonsils or adenoids and faulty posture. Other common defects which affect the child's health and school efficiency are bad teeth, faulty vision, bad hearing or discharging ears, skin diseases, and results of children's diseases. It is most important that the child and the parents understand these defects and the urgent necessity for their treatment.

The third step is to check up the food habits of the children and provide them with a proper diet for their age and condition. Besides taking too little food, many of these children have bad food habits—eating too fast, going without breakfast, drinking tea or coffee, eating candy between meals, or refusing cereals and milk. The child's habits of sleep, study, play and exercise should also receive attention, as all are concerned in his health and growth.

Such physical inspection and care would eliminate malnutrition among school children in a short time. It would also effect a tremendous saving of school money which is now wasted in trying to educate children who are, to all intents and purposes, sick children.

CHILD WARDS OF THE STATE.

Dependent Children.

The child may be taken out of home life and become dependent upon the state for a variety of reasons. In every instance the state becomes responsible for the providing or the failing to provide the personal care and educational facilities which will make that child an independent citizen, a happy human being and a worthy social unit. In cases where it is not possible to make a safe member of society out of the child he is entitled to be given into humane and scientific custodial care. This is essential both for the sake of the child and for the best interest of society.

In spite of a general social quickening to the rights of the dependent child, many states, including Kansas, still remain curiously apathetic and inert with reference to his rights. While no one could be found who would wish for this child to receive anything but fair treatment, there are few willing to actively espouse his cause and see that he gets a square deal. As it is, the state seems to be satisfied with the cold charity of a private institution, or by grudging appropriations to state institutions keep only soul and body together, and provide the modicum of education stipulated in the constitution.

There are at present time some 1,000 dependent children living in 23 institutions designed for their care.* The State Orphanage cares for less than 200 of these; the rest are to be found scattered about in orphans' homes of the widest range of purpose, equipment and efficiency. These homes are incorporated under the laws of the state, and thirteen of them receive some state aid. In addition to these incorporated institutions there are an unknown number of nonincorporated, private boarding houses and maternity homes which exploit their victims instead of soliciting funds. Thus they evade the letter of the law which regulates the conduct of only those institutions soliciting funds for charitable purposes. Worst of all, several counties in the state of Kansas still consign children to the poorhouse.

What is a Good Children's Home?

The state of Kansas, which permits dependent children, orphaned or half-orphaned, to be cared for by a variety of children's institutions, homes and home-finding societies, each of which is a separate corporation, self-perpetuating, virtually self-directing and practically without supervision, is beginning to question, "What is a good children's home?"

The average citizen probably could answer the question, "What is a good children's home?" only in the most general terms—that the children be well fed; that they be clothed and kept clean; that they be kindly

* Sixth Biennial Report of Board of Control of State Charitable Institutions.

treated, and that a doctor be called when they are sick. And an institution apparently answering such requirements no doubt would be reported upon as a first-class institution by a visiting lay committee. Where such institutions have been visited and so reported by lay committees, a trained investigator following has uncovered some unexpected details.

That the children be well fed: The expert found extremes of underweight and overweight, indicating that these children were not well fed; that the same food was being served to the entire group of children ranging in age from 2 to 16 years; that there were no prepared menus or other provision for such variety of diet as would give the children nutritious and at the same time the most palatable food.

That the children be clothed and kept clean: The trained investigator found that the children were kept clean because they were not permitted to play for fear of soiling their clothes.

That the children be kindly treated: The trained investigator found that the children were not whipped but they were deprived of necessary articles of food for petty offenses, made to kneel on cold stone floors or shut in dark closets for misconduct growing out of nervous disorders, when they needed instead expert medical attention.

That a doctor be called when they are sick: The expert found that more than half of these children in such institutions required medical or dental care, and that such care as was being given sick children was indifferent, careless and incompetent.

The absence of sickness does not indicate proper nor sufficient medical attention for a children's institution. Some children's homes pride themselves on the statement that "No doctor has been inside our home for a year or more." This is not a matter for congratulation. Instead, it is a serious comment upon the lack of understanding of the service a doctor should perform for children. Prevention is the goal of modern medical science, and "no sickness" does not necessarily indicate health.

It is not safe for any nonmedical superintendent of a children's institution to assume that the children are well so long as he does not see that they are ill. Accurate knowledge of a child's physical condition is essential to determine what is necessary to his perfect health and welfare. This knowledge can be obtained only by thorough and periodic physical examination by a competent physician, and the services of experts in consultation or treatment when necessary.

Obviously then these general terms that the children be well fed, clothed, kept clean, kindly treated, and a doctor called when they are sick do not adequately characterize what properly might be called a good children's home. These must be followed by specifications as to what is the right sort of feeding, what is proper cleanliness, what is meant by being kindly treated, and what is sufficient health protection.

In addition to these purely physical aspects of a good children's home, what about its management and more especially its ideals? What attitude does the institution take concerning the children? *Are the children themselves the real ends developed and conserved*, or are they the mere pawns of some other purpose of the institution?

What provision is made for the higher educational and vocational

equipment for life of these children? What are the aims of the institution as to the attainment of its wards? Does it regard each child as an individual, especially as to the kind of work required of him?

And what is most important of all, is the institution *getting anywhere* in its service to the children? Or does it fill in a few years of their young lives in a sort of indifferent way, beginning with no fixed program and ending with no definite results?

In an effort to answer the perplexing question as to what is a good children's home, various boards of health, charities and welfare have investigated hundreds of these homes. They have enumerated all the factors entering into a children's home, its plant, administration and ideals, and have endeavored to fix a minimum standard of excellence for each factor. It was found comparatively easy to enumerate factors and standards of excellence so far as the physical plant of the institution is concerned. It is vastly more difficult and very much more important to enumerate them so far as the management and ideals are concerned.

Obviously any arbitrary standard of excellence for children's homes has had to undergo numerous modifications in the light of practice and experience. No doubt, as methods in the care and management of children progress, these standards will undergo still further changes. However, in the light of our present knowledge and experience, a home for children should be able to pass a creditable inspection according to such standards already outlined.*

How Institutions are Rated. For convenience in rating, institutions ordinarily fall roughly into one of four classes—A, B, C, and D.

Class A institutions are those which measure up to the general requirements. These institutions are adequately equipped, well managed, effectively planned and efficiently conducted. They are giving scientific care to their children as well as a happy home life, and are meeting the needs of their community to the extent of their capacity.

Class B institutions are those which are lacking in some respects, but which are making a strong effort to attain to the general requirements. These institutions are not always properly equipped. In their management they are prone to substitute good intentions for scientific knowledge. And while their ideals are high enough, they have rather hazy and indefinite or altogether mistaken ideas as to how to put them into practice or bring them about.

Behind such an institution one generally finds a genuinely self-sacrificing board, working not for glory or for profits but solely for the welfare of the children. This sort of institution offers something tangible to work upon. With scientific direction as to hygienic arrangements, balanced diets, medical treatment of children, child placing and other problems, and with proper official recognition and support, such homes may readily be brought into class A.

Class C institutions are those which have serious defects as to plant, administration and ideals. The equipment of these institutions is poor, the management lax or grossly incompetent, the ideals low, and the purposes for which a children's home should be maintained lost sight of in the pursuit of money, religious proselyting or fanaticism, or merely the

* Child Caring Institutions, Department of Public Charities, New York City.

endeavor to appear philanthropic. While in a few instances these institutions may be cited as doing good, yet on the whole they are doing actual harm in that they fall so far short of any satisfactory program of child care or of equipping their children in any measure for a normal home life. These institutions have been allowed to exist for years on the same dead level of inefficiency, because of a general lack of understanding as to what a children's institution should be, also because of lack of interest or courage on the part of the community and the state to demand their improvement.

Class D institutions are those showing an absence of all progressive child-caring standards in plant, administration and ideals. Among these are the wholly useless, the disreputable and the illicit.

According to this method of rating, *there is not a single home for children in Kansas entitled to a rating of class A*, although there are several that with a little assistance and direction may attain this rating. There are many class B institutions, and as many or more perhaps in class C than in class B; there are several in class D.

Class B institutions need official recognition and constructive supervision.

Class C institutions need the same perhaps in greater detail. If they fail to take cognizance of official direction, they should be compelled to improve or be closed.

Class D institutions should be discontinued without parley or temporizing and the helpless children removed to more favorable environment.

Inspection of Children's Institutions.

The wide diversity of conditions obtaining among the children's institutions in Kansas may be judged from the following extracts from confidential reports on file with the State Board of Health and the State Board of Administration. These reports were made by various competent persons—members of the Boards of Health and Administration and their staffs, by agents of the Federal Children's Bureau, by college instructors, and by others equipped for special phases of this sort of inspection.

CHILDREN'S HOMES.

Rescue Mission and Orphan Asylum. This institution harbored 55 inmates, about half of them babies under three years of age. The adults represented various stages of social maladjustments. A tabulation of the infant deaths in this institution showed that out of a total of 26 deaths for the given period, 6 were from inanition and 10 from enterocolitis, which are terms for improper feeding.

Twenty or more toddlers were found in a so-called day nursery, which was reached by passing through a filthy kitchen and unlocking a door. All of them were whining or fretting—some were coughing. Around three sides of this room was a shelf about a foot wide and covered with oil cloth. The small chairs were pushed in front of it, and from the shelf the children were eating. There was absolutely nothing in the room beside this shelf, the chairs and the children. The little ones were dirty and unkept. There was no older person with them. Both doors were locked

and windows tightly closed and covered with dust and cobwebs. On asking to see the play yard, a back door was opened and a chicken pen divided from barn by high board fence and gate was revealed. The barn with a manure pile thrown out of its window was within thirty feet of this place, while investigation showed the front yard was large and set with shrubbery and flower beds.

Five or six babies were found in the nursery upstairs, several of them exhibiting extreme degrees of malnutrition. The odor in this nursery was so vile that it was almost impossible to stay in the room. A number of young children in the cribs were in wretched condition. One was sucking a mixture of peach tree leaves, supposedly for teething troubles.

The one small bathroom in the house was equipped with one tub, one seat, an old tin wash basin and a common towel. The matron told us these were for the use of the entire establishment. A few wash bowls and pitchers were seen on the third floor, which apparently constituted a rude hospital for the care of women in confinement.

This home is not properly equipped to take care of children; it is insanitary and dirty; the children are not kept clean nor properly fed; the death rate is higher than it ought to be; it is not a fit place for young children so long as adults of all ages and stages of moral and social degeneracy are being brought there constantly; and the management is bringing children from other states contrary to law, such children being likely to become public charges in Kansas.

Children's Home No. 1. The children in this institution were found playing happily. They were entirely free from restraint and called the matron "mother." They were clean and in very good condition considering the lack of equipment. The building is old, without running water, toilet or bathroom facilities, and entirely unsuited for the purpose. There were more than 20 children, with sleeping quarters for only half that number. The children were sleeping four or five in one bed.

Children's Home No. 2. The equipment of this home is pitifully insufficient. The house is old and in such a bad state of repair that it needs to be replaced by a new one. Considering its age and condition and the difficulty of keeping such a home clean, the house was in exceedingly good order. The children were happy, free from restraint, and gave every evidence of being kindly treated and well cared for to the best ability of the management.

The home needs to provide individual towels and toothbrushes for the children's bathroom. The teeth of all the children should be examined and necessary dental work undertaken. Many of the teeth were in bad condition. The health of these children would be greatly improved by a thorough physical examination and corrective treatment. A mental test should also be given each child when admitted. It was apparent that several of these children were feeble-minded or suffering such other mental defects as would make them unsuitable for adoption or indenture purposes. Such mental and physical examination should be extended also to the employees, several of whom did not come up to proper health and ability standards. One woman in particular was waiting on the children while suffering with a bad cough, obviously of a tubercular nature.

Children's Home No. 3. This institution was housed in an old two-story frame building which was as clean as good housekeeping can make it. The sanitary arrangements were bad and the building was totally inadequate for the purpose for which it was being used. The steam-heating plant was out of order. A few of the rooms were being heated by gas stoves.

The children, about a dozen of them, including three of the superintendent's own, were found in a dark semibasement, which was used also as a kitchen and dining room. To reach this room the children must descend a very steep, dark and unsafe stairway and pass through a room which is used as a laundry. It was neither a safe nor proper place for them, and instructions were given to the superintendent to utilize a large room on the first floor, which needs only heat and some equipment to make a first-class play room.

This home has been warned repeatedly by the former Board of Control to put its heating plant in order and to take the children out of the dark semibasement. Apparently it needs more than warning.

Children's Home No. 4. This institution contains about a dozen children, with adequate quarters for twice that number. The place was immaculately clean—perhaps too clean for comfort. The best room in the house—a large south room which would be ideal for a children's play room—has been reserved for the exclusive use of the board meetings.

The day the inspection was made the children were in the yard, locked out of the house while the kitchen floor was being cleaned. There was no play room in this house, no library, and very few games or toys. The dining room was cheerless, and no tablecloths or napkins were used. The food was good, but the service was so unattractive and the dining room so cheerless as not to be conducive to good manners or good digestion.

There was no tooth powder nor toothbrushes for the children. Practically every child in this institution needs some medical or dental treatment. At the time of the inspection there were two feeble-minded girls of child-bearing age in the home. Both of them should be sent to Winfield for permanent custodial care.

Children's Home No. 5. This children's home was housed in a beautifully appointed building and in most respects was in excellent order. The children were absolutely free from restraint and the institution would pass as high class. The present dormitories were crowded, making it difficult to obtain a sufficient supply of fresh air. The windows in the boys' play room were closed and the fastenings were locked. This room was crowded also and had a decidedly bad odor.

The medical attention, while of a high order and better than the average children's home, still is not adequate. One physician in general local practice devoting his part-time services to more than seventy children cannot give them medical attention in accordance with modern standards. It is suggested that instead of one practicing physician, a staff of children's specialists which are available for this institution be organized, so that these children may have the best treatment obtainable. With a few minor changes this institution could come into class A.

MATERNITY HOMES.

Maternity Home No. 1. This institution was found to be in beautiful condition. The home was clean and attractive and the girls gave every evidence of being well cared for. At the time the inspection was made there was found an imbecile who had just given birth to a baby—her third. She had given birth to twins previously. Yet this girl cannot be sent to a proper institution without the consent of her parent or guardian. Unfortunately parents and guardians rarely, if ever, recognize the need for proper care for this sort of a girl.*

Maternity Home No. 2. This home was housed in an old two-story frame dwelling in a bad state of repair. The inmates consisted of several aged indigents, six children from eleven to sixteen years of age, and one maternity case. The maternity case was a colored imbecile, thirty years of age, of a very low order of intelligence, almost an idiot, who had given birth to a baby a month previous. A mother of such a low grade of intelligence cannot in any sense be held responsible for her conduct, nor is such a baby fit for adoption.

Application papers were sent to her county to have the mother and baby sent to Winfield for permanent custodial care, but owing to the peculiarities of the feeble-minded law in Kansas such a girl cannot be sent without the consent of her guardian or parent. The girl presumably has been returned to her home. The usual history of such cases is that they return in a few years with another baby.

Maternity Home No. 3. This maternity home is also being used as a temporary detention home for children and adults. The home is wretchedly poor and in exceedingly bad hygienic condition. There is no medical attention, as the matron herself is a midwife and attends the girls in confinement.

At the time of the inspection there was in the home a feeble-minded pregnant woman (possibly insane), twenty years old, with her two defective children. The oldest child, two years old, could not stand alone. The baby was seven or eight months old, and the woman was expecting the third child in a few months more. The husband at the time was before the court on nonsupport and cruelty charges. This man may be punished by being fined or sent to jail. There is no law which provides permanent custodial care for such a man and woman and their children. Yet it is very obvious that if these two are allowed to continue in their present way they will in time produce a large family of feeble-minded and defective children.

Maternity Home No. 4. This institution was housed in a three-story ramshackle old fire trap. The sanitary arrangements were very bad and the home was exceedingly dirty. There was no heat provided in any of the girls' rooms. The confinement room was heated by an open stove. The ward room where the patients convalesce was heated by a soft-coal laundry stove. This home is so far below the minimum standards of hygiene and decency that it ought either to be compelled to improve and clean up at once, or it should be closed without any further temporizing, and the girls removed to better surroundings.

* Since sent to Winfield.

PRIVATE INSTITUTIONS FOR CHILDREN, NONINCORPORATED AND
NONCHARITABLE.

If present methods of inspection and regulation are lax concerning incorporated institutions, they are hopeless in so far as the nonincorporated institutions are concerned.

Not one board in the state of Kansas, nor the combined authority of all, can reach the very worst offenders—the private boarding home or institution which is nonincorporated and which does not solicit funds.

Under the present laws of Kansas any sort of person at any time or place may open any sort of home or hospital for children or expectant mothers, and conduct it in any sort of way, without even the knowledge of any authority of the state, much less any kind of supervision or control.

The following extract from a Kansas City paper is a glaring example of what has already happened in Kansas. The Charter Board has no record of this home, and neither the Board of Administration nor the Board of Health knew that such a home was in operation until the story was uncovered by newspaper reporters.

Maternity Home. "Amid the most miserable surroundings, in a house in which there was no light, no heat except a small oil stove in one room, and no water, a nameless baby boy came into the world at ——— last Friday night. The only attendant to the unfortunate eighteen-year-old mother was another girl whose baby had been born five days before and taken from her. She had never seen it. The telephone in the house had not been connected, and help could not be summoned by that means. There was no food in the house. Alone with the young mother, in absolute darkness save for the red glare on the floor from the oil stove, she had been carried into the house but a few hours before. The other girl dressed herself as best she could and in the chilling wind made her way to the house of a neighbor. There she told the story of the unfortunate young mother in the big, cold, dark house across the street.

"These girls had come to the so-called maternity home which had been advertised in Kansas City papers. They were charged \$10 a week and \$25 when the baby was born. In spite of the fact that they had paid for care and medical attention, the unfortunate girls were given no medical attention, not even a nurse, were given only cold food—ham, crackers and oranges—and were not provided with hot water. The doctor who had been conducting this maternity home has a long and unenviable court record."*

A Private Boarding Home for Children. This home boards children, charging from two to five dollars a week. Living in a six-room cottage were the matron and three adult members of her family, one boarding mother, and ten children. The five adults and ten children were provided with three double beds and one tick on the floor. Two of these children were girls about eleven and thirteen, and one boy was about thirteen. The sanitary and hygienic conditions of this home were indescribable.

* This doctor was brought into the county court, but as the girls did not appear against him he was acquitted. His court record was submitted to the Kansas State Board of Medical Examiners, who have authority to revoke the license, but so far no action has been taken.

The only recourse under the present law is to obtain a court order for removal of these children. There is nothing to prevent others from being put there as fast as the court takes them out.

Day Nursery and Boarding Home. The home was fairly well arranged, but was very untidy. As too many children were taken, it was too crowded. The matron and one feeble-minded woman were trying to feed and care for twenty-five or thirty children. The nursery beds were not supplied with sheets and clean bedding. The beds and mattresses were in bad condition.

SUMMARY.

Instances of exploitation and tragic lack of proper care of the dependent children of Kansas could be repeated in endless sequence, but enough has been said to indicate that there is something radically wrong with the present method of dealing with dependent children. More than a million dollars is invested in the state of Kansas in orphanages for the care of these children. These places spend in the aggregate between two and three hundred thousand dollars every year, and still these unfortunates receive nothing but bare subsistence. The method is wasteful and inefficient, and what is worse, robs defenseless children of their natural birthright.

A state orphan asylum in this day and age is an anachronism. It does n't belong. It exists only as a monument to indifference, ignorance and neglect. The present State Orphans' Home could with advantage be transformed into a clearing-house and child-study laboratory—the only legitimate use for a congregate home. This should be used as a receiving station for every unfortunate child in the state. Here the child should have complete physical and mental examination and treatment and should be brought up to physical par with the greatest possible rapidity. His heredity and temperament should be studied, and when it becomes clear as to what is the proper place for him he should be fitted into that place. If he is a fit subject for adoption or care in a normal home, he should be given into the care of a specially trained agent to be fitted into a home, and carefully watched until he reaches maturity and relieves the state of further responsibility.

If he is found to be unfit for life in a home by reason of physical or hereditary limitations, he should be placed in the custody of some institution especially equipped to care for his particular condition. This method would automatically empty and dispense with the small, inefficient local orphanages.

The state of Kansas should make it impossible for any individual or group of individuals to receive children or pregnant women without a proper license, regular inspection, and the same amenability to the law as incorporated hospitals, hotels, eating houses and other public accommodations.

It should forbid the detention of children in poorhouses, jails or other places where feeble-minded, insane or criminals are kept, or other persons of a character undesirable as associates of innocent childhood.

It should arrange for the creation of a responsible body of specialists, or the powers of the Division of Child Hygiene should be increased, to

whom should be entrusted the working out and administration of a plan for the care of all child wards of the state, including foundlings.

Child Placing.

The normal child belongs in a *home*, not in an institution. Every institution in Kansas receiving children has the right to indenture or adopt children into homes, but not a single institution has adequate and competent machinery for placing children or for supervising them after adoption.

The biennial report of the State Orphans' Home for 1914-'16 states that the Home at that time had out under active indenture more than 500 children. It has one agent to place and supervise these children. The maximum number which one agent can place and keep under supervision with anything like adequate attention is fifty. With a small district, good facilities for transportation and the cumulative advantage of acquaintance with the territory, this number may under favorable conditions be increased to 100. The advice of expert investigators, however, is that the number be limited to 50 children per agent. The statement made in this report *that the one state agent of the State Orphanage cannot possibly supervise 500 children should receive attention and active consideration.**

There are no reports available as to the number of children who have been indentured previously by other organizations caring for children, with the exception of the State Orphan's Home and the Kansas Children's Home-finding Society. If the State Orphans' Home, caring for less than one-fifth of the dependent children of the state, has 500 out at one time under indenture, it is probable that there are from 3,000 to 4,000 children scattered about in homes of the state.

It is inhumane to take a defenseless child out into the state and lose him, for that is what it amounts to when the agency which places the child fails to keep in touch with him. Families have even moved out of the state taking indentured children with them, and left no trace. It would be difficult, if not impossible, to even locate all the children of present minor age who have been thrown upon the tender mercies of families and forgotten.

One children's home-finding society has about 1,000 children under supervision in homes. These are under the active supervision of six district agents. These children remained in the receiving home for an average of only twenty days each. Children in need of surgery or medical attention were attended to before they were sent into the homes. This organization finds no difficulty in finding homes for children. The superintendent states that there are always from one to two hundred appli-

* "Our experience in placing of children has completely confirmed in our mind that 90 percent of those who take our children into their homes do so for commercial reasons and not because of any real love for the child or desire to benefit his condition. It is for what they can get out of him in dollars and cents rather than for what they can see in him as a future citizen of the commonwealth. . . . Those in need of cheap help take the children out in the spring and keep them during the busy season, and return them when the work is over and they must be at the expense and trouble of sending them to school and otherwise provide for their training."—From Report of Superintendent of State Orphans' Home for biennial period 1914-'16. This statement is sufficient evidence of the charge that the State Orphans' Home is not competent to investigate the homes into which it sends the child wards of the state, nor equipped to supervise them.

cations for children on file. No papers are made out until a child has been on probation in the home under the supervision of an agent for ninety days. If at the end of this time both family and child seem happy and suited to each other, papers of indenture or adoption are signed. Children are often moved before the expiration of the probation period, but seldom afterward.

This organization at one time offered to accept from the state and place in suitable homes and supervise all the children suitable for placement which should be given to them for this purpose, and to do it at a total cost to the state of \$50 per child. It cost during the biennial period of 1914-'16 an average of \$239.34 yearly per capita for the support of the children in the State Orphans' Home. Certain of these children properly belong in the School for the Feeble-minded. The majority of them, however, are suitable or can be made suitable for placement and adoption. There is no question but that it is far cheaper in the long run to place and supervise than to support them.

Granting that there are 1,000 children in residence in orphanages and 4,000 more scattered over the state, or an estimated total of 5,000 children whom we will assume to be suitable for normal home life, it would require a force of fifty paid agents to place and systematically visit all these children, and the total expense to the state would approximate \$150,000. Allowing a maximum salary of \$1,800 and maximum traveling expenses of \$1,200—a total of \$3,000 per year for each agent—with an average of 100 children assigned to each for placement and supervision, the average per capita expense per child would approximate \$30.

The reports from the private orphanages are too imperfect to furnish data as to per capita cost and attendance.* Taking the per capita cost at the State Orphans' Home as a basis (in all probability some homes spend less and some more), it costs the public of the state approximately \$240,000 per year to support this thousand children in residence in institutions, or a sum sufficient to place and adequately supervise all the 5,000 dependent children of the state and keep a record of them until maturity, and have a balance of some \$90,000 per year to devote to the maintenance of an adequate clearing house, detention home and child laboratory.

It is not good business, it is not humane, to continue the present archaic, ineffective, outgrown method. The war is raising the value of the individual citizen and making life very hard for the unprotected. Both sentiment and common sense demand speedy action.

* Tabulations were made of the reports for the fiscal year ending June 30, 1916, of twenty-two institutions legally authorized by the state to receive and dispose at will of dependent children, and required by law to render yearly reports covering specified points. Two children's homes and five maternity homes made no report whatever as to the number of children handled or their disposition. Nine homes reported receiving a total of 208 more children than they accounted for, while five other institutions reported the disposal of a total of 47 more children than they had received!

The institutions (including the State Orphans' Home) reporting on this point reported themselves as having cared for a total of 1,808 children during the year. They reported 908 as remaining in residence at the end of the year covered by the report. A minimum estimate of the children cared for by the remaining seven institutions makes it appear certain that at least a thousand children were at that time in residence in these twenty-two homes. It is safe to assume that this figure remains fairly stationary.

The average daily number of inmates does not appear on these reports, with the exception of the State Orphans' Home. The financial reports are not accurately made, only six showing debit and credit statements which balance. It is therefore impossible to figure the per capita cost of the support of the inmates of private orphanages.

Children in Kansas Poorhouses.

The county poorhouse, as it is usually administered, is a close relative of the medieval almshouse of deservedly odious repute. Yet within the past year in the state of Kansas twenty-four children in six counties have been incarcerated with the veritable "scum" of feeble-minded, hopelessly insane and social derelicts who people these institutions.

In response to inquiry as to why these children were harbored in the poorhouses, several reasons were given:

Most often, the young child remains in the custody of a feeble-minded or derelict mother, who goes and comes. Sometimes she goes and comes until she has two or three children for the obliging county officials to take care of.

A temporarily dependent mother and children are cared for in the poorhouse and the children sent to school. This is not in accordance with the intent of the mother's pension law.

The probate judge commits juvenile offenders or truants to the almshouse awaiting their trial. In one county a colored girl of eleven and a white girl of about the same age were kept in the county house all summer awaiting the action of court.

Dependent children are carelessly committed to the county house because there is no orphanage near and it seems easier to keep them at the expense of the county in the county home than to send them to the state orphanage. One boy of thirteen was sent to the poor farm when both his parents were sent to the penitentiary and has remained there for three years, and is now drawing wages as a helper.

Every one of these classes of children belongs elsewhere. No county house or other place stigmatized by the term "pauper" is a proper place for any child. No child is or can become a pauper, because the state which permitted him to be born within its jurisdiction owes him support and education commensurate with good standards of citizenship, regardless of adverse accidents of circumstance.

Defective Children.

There are five special classes of defective children who should be separated from normal dependent children and also from normal homes. These are the feeble-minded, the blind, the deaf and dumb, the epileptic, and the crippled. This separation is necessary, both for the sake of obtaining for the atypical child the specialized care his condition indicates, and also for the sake of relieving the home and school in certain instances of his undesirable influence.

Kansas has established the following institutions for the care of these children:

	Population.
State School for the Feeble-minded, Winfield	663
State School for the Blind, Kansas City.....	104
State School for the Deaf, Olathe	240
Colony for Epileptics, Parsons (both adults and children), children, approximately	125
	<hr/> 1,182

Besides these four classes, the state provides medical and surgical care for indigent children at the State University Medical School at Rosedale.

While the exceptional child must have specialized care such as can seldom be given him in any home, every precaution should be taken to make him *feel as normal as possible*. A special study should be made in each of these groups of the psychology of "set-apartness" and its reaction upon the effective physical and mental life of the child.

Along with orphanage, the special institution needs to emerge from the custodial to the research conception of its function and duty. No institution for defective children should be permitted to lapse into mere custody of the person of the limited child.

FEEBLE-MINDED.

There are at present 663 feeble-minded persons in residence in the state institution at Winfield. These are chiefly idiots and low-grade feeble-minded, whose mentality is of such a caliber that they do not respond to educational effort.

The vital problem to the state is not the detection and care of the low-grade idiot who can harm no one, but rather the individual who becomes arrested at the mental age of 7, 8 or 10 years, but whose animal appetites and passions go on to full maturity. These are the individuals who furnish a very important percentage of the inmates of penitentiaries, houses of prostitution, jails, poorhouses, houses of correction and reformatories. These individuals propagate their kind freely and unreservedly. The consequence is that society replenishes itself much more lavishly from the bottom than from the top.

The crux of the whole matter lies in getting the mentally retarded child young enough to give him appropriate vocational training and chance for self-development. *If it be found that he can never arrive at a mental age of sufficient maturity for social safety, he should be segregated in time to keep him from becoming a social menace.*

A complex machinery is necessary in order to accomplish this effectively:

1. The location of mentally retarded children in the schools. This can be done within wide limits by the untrained teacher. It can be done effectively only by the trained psychiatrist.

2. The establishment of a suitable number of ungraded classes under specially trained teachers, in order that these children may be taught the things that they have the capacity to learn, and especially that they may have vocational training to fit them to become self-supporting. When it becomes apparent that they cannot be made competent to lead a safe and independent existence, they should be taken out of the public school and sent to the state school.

3. A state training school and psychopathic hospital for the study of the problems of feeble-mindedness, for research, and for the education of children who do not have access to special teaching in the public school or who present special problems in mental abnormality.

This training school and psychopathic hospital might be built in connection with the present custodial institution at Winfield. This would mass

the problem of mental variation which would be an advantage as far as research activities are concerned and it would economize administrative machinery. Other phases of the problem of feeble-mindedness are discussed in the legal section of this bulletin.

THE BLIND AND DEAF.

The vocational competency in after life of both the blind and the deaf depends so directly upon the quality of specialized teaching they receive, that it is necessary that they be well taught in order to save them from lifelong dependency. Many soldiers will be coming back blind and deaf and in urgent need of specialized vocational training. It is a mistake not to keep these schools at their highest efficiency on the eve of a greater need than ever for highly specialized teaching machinery.

The state of Kansas, in common with many others, has deemed it the part of economy to get the work of its institutions done as cheaply as possible. This is a false economy for any institution, but more especially in the case of the blind, because they are less able to assist with the work of the school plant and require more personal assistance.

A certain percentage of blindness and of deafness is inheritable. It is known that there is a group of men and women in southeastern Kansas affected with inheritable forms of these defects (some of them former students of the state schools) who, if not properly controlled, will by their numerous progeny keep the schools for the blind and deaf people indefinitely. Another considerable percentage of blindness and deafness might have been prevented by proper attention in time to babies' eyes and ears.

The prevention of both the inherited and the acquired forms of blindness and deafness will cost infinitely less than to support and educate the unfortunate victims.

THE COLONY FOR EPILEPTICS.

The state of Kansas has established a colony for epileptics with a total population of 530, approximately a fourth of whom are children. There still remain many epileptics who should reside in this colony. Were the advantages both to the epileptic himself and to his community better and more widely understood, there would be fewer at large.

Epilepsy has thus far baffled medical science, but it is bound to be conquered some time, just as so many other diseases have been and are being conquered. Until that time there should be insistent and untiring research in every institution harboring these unfortunates. Instead, the state of Kansas provides only custodial care.

CRIPPLED AND SICK CHILDREN.

The epidemics of infantile paralysis have left a trail of pathetic little victims. This is another instance where highly specialized care is necessary if the child is to be saved from lifelong helplessness. Bone tuberculosis numbers many victims who need orthopedic, medical and hygienic treatment. Various nervous and constitutional maladies require hospital care and special medical attention. A great variety of defects aside from those mentioned should have surgical relief.

In recognition of the fact that many children in many communities

were totally unable to have proper attention, the state legislature in 1911 provided a method by which parents who are unable to pay for hospital treatment for their children might have them cared for by the hospital of the University School of Medicine at Rosedale. But the appropriation and equipment for the care of crippled children at Rosedale is entirely inadequate to meet the demands.

The state should provide the Division of Child Hygiene with sufficient funds for locating these children and the University Hospital with adequate facilities for giving them proper care.

THE INCORRIGIBLE CHILD.

	Population.
Industrial School for Boys, Topeka.....	239
Industrial School for Girls, Beloit.....	165

Students of childhood say that there are no bad children; there are only misunderstood children and children who have never had a chance to be good. There are also children who have inherited tendencies and mental limitations which prevent them from discriminating between right and wrong. There are others who offend because of the incessant irritation and drag of defective and undernourished bodies. These children should be no longer punished and branded with disgrace. They should be studied. The fault usually is found to reside not in the child, but in his inheritance and environment. When the fault is in the child there is all the more reason to study him, for he has a sick mind or a sick body—often both.

There is no greater need for a clearing-house and child-study laboratory than in the case of the child who rebels against his environment and wreaks his vengeance upon it in some way which makes it desirable to remove him from it. It is an infamous thing to stigmatize such a child by sending him to a reformatory or prison. This whole matter could be handled through a clearing-house system with far greater justice, economy and safety to the child than obtains under the present method of commitment. Every child should automatically be put in good physical condition. This alone will dispose of a certain number of cases. The child who is merely unfortunate and misunderstood, and who shows character in resisting a bad environment in the only way he knows, need never be sent to an institution at all. He should be placed in the care of a discriminating agent and fitted into the place he needs—a home. The child who has a perverted or retarded or abnormal mind should be placed in the psychopathic department of the proper institution. He should be studied, and helped if possible. But he will be safe, and so will society. This last class should not be kept with the children who can be helped and who are relatively normal. It is an injustice to both classes of children and to the management, since the same treatment is not applicable to both.

The weeding out of the misunderstood, the physically defective, the psychopathic, the subnormal and the degenerate will leave a small residue of "difficult" children who need careful training and study, but who may become fairly good citizens under proper care. This is the only legitimate use for a congregate school of this sort.

CHILD-WELFARE LEGISLATION.

For the legal research necessary to the following analysis of child-hygiene legislation in Kansas we are indebted to Edna Pierson Hopkins, LL. B., Topeka.

As the infant mortality rate is said to be the most sensitive index we possess to social welfare, so the laws relating to children may be said to reflect accurately the social tendencies of the times. Nothing is more significant of the social awakening than the many movements for the study and the improvement of legislation guarding the rights of the child.

Statutes have mainly to do with the protection of the property and the social rights of citizens, and the punishment of offenders. Statutes take cognizance of the status of the child. The law specifically exempts a child of seven years or under from punishment for crime. In the eyes of the law the child under seven can commit no crime. The law also recognizes the principle of accountability as expressed in the age at which majority is attained. Generally at eighteen or twenty-one the citizen is held to be an adult and fully accountable before the law.

What the law has not yet recognized (in line with the latest developments in science) is that the chronological birthday, eighteen or twenty-one, does not indicate necessarily that the citizen has reached that age of accountability. A twenty-first birthday does not differentiate adequately between the minor and the adult, because a considerable percentage of offenders before the law never reach the mental age of eighteen or twenty-one nor the status of accountability as an adult. They are and always will be of the mental status of a child, and so cannot properly be held to account according to adult standards of conduct.

In another respect legislation for children differs from average legislation for adults. Child legislation must look to the preventive side of offenses and crime rather than to the curative. Legislation for children must throw such safeguards about the child, his home, his parents or guardians and his environment as to make offenses against the law approximately impossible. To do this, laws for children need to follow less the established procedure or precedence in law and to follow more the latest and best discoveries in the science of child hygiene and welfare.

With the thought of stimulating an inquiry into the present status of Kansas laws for children, this short analysis was written. Only a few of the more immediately important laws were investigated, and of these a necessarily incomplete analysis is presented because of the short time and the very limited funds at the disposal of the Division of Child Hygiene. This is presented, however, with the hope that it will stimulate a thorough investigation of existing legislation for children in Kansas and that eventually a complete codification of children's laws may be effected.

Birth Registration.

Scarcely a day passes but that some bewildered individual comes to the vital statistics office of the State Board of Health seeking proof that he is an American citizen and a Kansan.

France has had complete and accurate records of her citizens since 1687. Kansas has records dating only to 1911. In order to make available a permanent record of the birth of every Kansan the State Board of Health is establishing files antedating 1911 and sufficiently complete to include every citizen who will avail himself of the privilege of registering. These records will become increasingly important to succeeding generations.

Following the close of the great war hundreds of claims of various kinds will appear, in the settlement of which a demand is likely to be made for a certificate of birth as proof of citizenship. If this certificate were on file with the Kansas State Board of Health it could be had in a few minutes' time. If it is not on file the claimant will be required to go to considerable effort and expense to furnish the proper proofs.

A birth certificate is now required to obtain a passport to a foreign country, to obtain a soldier's pension, and to establish American citizenship.

A birth certificate may be required to establish identity, to enter school, to employment under child labor laws, to inherit property, to establish liability for military service and exemption therefrom, to vote, to hold title, to buy or sell real estate, to marry.

In order to make the importance of birth registration more generally known and Kansas records more complete, a request was sent to school authorities asking that they require a birth certificate as proof of age when entering school. As a further check on the birth registration, the Department of Labor requested county and city superintendents of schools to require a birth certificate in granting work permits to children. With these two checks through the school authorities, Kansas birth registration should be made practically complete.

Mothers' Pension Act.

The problem of poverty exerts a marked influence on child mortality. Whenever the standard of living drops to or below the border line of economic security, immediately the death rate of minor children begins to rise. When the father as a principal breadwinner is absent and the mother compelled to take both a father's and mother's place, the problem is still further complicated by an additional increase in child mortality and an increase of juvenile delinquency as a result of the lack of watchful care of a mother.

In recognition of this condition and to a somewhat less extent in recognition of mother's service to her state in producing children, the mothers' pension acts came into existence. The Kansas mothers'

pension act, as it now reads in Session Laws of 1917, is "An act to amend chapter 261 of the Session Laws of 1915, the same being an act to amend section 6624 of the General Statutes of 1915, relating to the poor, for the relief of widows and dependent children, and repealing said original section. This act provides that the board of county commissioners may, in their discretion, allow and pay to poor persons who may become chargeable as paupers such annual allowances as will not exceed the charge of their maintenance in the ordinary mode. Such allowances are to be paid from the funds in the general revenue fund of the county.

In order to obtain a knowledge of the practical workings of this law a questionnaire letter was sent to numerous counties asking for the number of mothers helped, the amount of money paid out for pensions by the county, the type of women given assistance, and the attitude of the commissioners toward giving pensions. A digest of the answers follows:

County A Reports: There are no mothers receiving the pension, but about \$400 is paid out each month to the poor of the county. None of this money is paid under the provisions of the mothers' pension act.

County B reports: Seven mothers were given assistance during the year. The amount of money paid out was \$804. Good, hard-working women were given the pensions. The attitude of the commissioners toward the pensions reported as being all that could be desired.

County C reports: Commissioners are opposed to giving pensions, because the county is an industrial center and there are so many widows that the commissioners say it would bankrupt the county to begin giving pensions. The question is asked from this county, whether or not the law would be more effective if the fund were provided by the state instead of each individual county. They suggest that as the state reaps the benefit from these industrial counties, it should share the responsibility.

County D reports: Six pensions were given during the year. Amount paid out, \$564. Commissioners are very slow to give pensions on account of lack of funds in the county. Type of women given aid are unfortunates who are left with large families to support.

County E reports: Work progressing well, but commissioners more or less hampered in the giving of pensions by the lack of funds.

Further reports and interviews with women appointed to investigate applications for funds under this act concede the same essential details: That the county commissioners as a whole would favor the granting of mothers' pensions if they had a definite fund to draw from; that trained supervision of investigations, and uniformity of method is desirable.

The adoption of a mothers' pension act in Kansas was a big step forward. But it is not enough merely to place an act on the statute books—the law must be a workable one and provisions must be made to have it carried out in proper spirit of the statute. Nor should any act be permitted to lose its force because of lack of funds by which it may be administered and the provisions carried out.

The Kansas mothers' pension law as it now stands needs further study as to the provision of funds by which the law will become effective, and as to the methods of administering which will carry out the purposes for which the act was intended.

Children Born Out of Wedlock.

The Declaration of Independence declares all men to be born free and equal; the constitution of the United States guarantees to all life, liberty and the pursuit of happiness. Neither specifically excludes the child born out of wedlock. Yet if a child is so indiscreet as to be born without a marriage certificate having first been obtained by his parents he is deprived of a natural home, parental care, guardianship and sustenance, and he stands condemned as a quasi-criminal throughout his life.

Laws affecting children born out of wedlock are a heritage along with the rest of the common law. The Napoleonic code not only gave the child born out of wedlock no rights, but it forbade any inquiry into its paternity. The common law of England, failing to stop illegitimacy by punishment of the women, visited the punishment upon the innocent child by declaring it to be "the child of no one" (*filius nullius*), and entirely relieved those who gave life to it from all responsibility. Later laws were enacted regarding illegitimacy, not with a view of doing the innocent child justice but as a part of the poor laws, with a view to protecting the community on which fell the burden of the child's support.

The law concerning illegitimate children in many parts of the United States, including Kansas, still stigmatizes a child born out of wedlock as a "bastard." In Kansas an unmarried mother who is delivered of or pregnant with a "bastard" child may make a complaint in writing before a justice of the peace charging the father of her child, who is thereupon arrested and brought before the magistrate. If the case is sufficiently clear the accused man is held for trial before the district court. If the defendant denies the charge, the trial must be by jury.

These cases are tried in open court, usually with a large and interested audience. The girl is subject to severe and often shocking examination and cross-examination. A common form of defense is to attack and try to tear down her previous good character, often going to the length of introducing several witnesses for the defense to swear to improper relations with the girl in order to throw in doubt the paternity of the child. If the girl is successful in her suit, the man is adjudged the father of the child and is charged with its maintenance and education. If he fails to do so, he may be sent to jail, but not for more than one year. If in the meantime he should leave the state, there is no law for bringing him back as in the case of stealing a horse or selling a jug of whiskey, unless he should be charged also with criminal action.

The law primarily does not protect the child and the mother, but the possible father. *She and her child are guilty. He is guilty only if she can prove it.* And the length of publicity and public humiliation to which she must go in order to prove paternity and obtain support for her child is scarcely worth the effort. If the mother is ignorant of the law,

or if, as the case often happens, she is poor and without friends or is of low mentality,* she can obtain no redress whatever.

As a result of this condition, a girl who finds herself in trouble generally flees to a distant city to hide her shame.† Often she does not give her right name. She goes to the hospital alone, and there alone she brings forth her child. When she has again recovered her strength, she goes on her way alone. Or, with a courage beside which ordinary heroic achievements pale into insignificance, she takes up the unequal burden of supporting them both—she an “outcast” of society, her child a “bastard” before the law.

One of the most potent signs of the awakening social consciousness is the agitation for an improvement of the conditions of the unmarried mother and her child. One proposed remedy which has received a great deal of public attention is the so-called Castberg law, now in force in Norway. Under the Castberg law the burden of proof is thrown upon the reputed father, who is guilty until he proves his innocence. If more than one man may be the possible father of the child, each may be held liable to contribute to its support.

Any proposed statute for the protection of a child born out of wedlock should provide for the legal status of the child, its maintenance and education, and should relieve the mother of the cost and entire responsibility for the action. The guiding spirit of such a law should be the welfare of the child. To this end the court should be empowered to decree whether the child takes the name of the father or the mother, how much each shall contribute to his support, including cost of confinement and cost of suit, which one shall have the custody of the child, and all such other necessary power to give the child all its legal rights as though it were born of lawful wedlock.

Laws now enacted by progressive states provide that any interested person (by permission of the court) may bring action to determine paternity; that the service may be obtained by publication instead of arrest and the case heard in closed court, that the evidence may be sealed, and that the right of extradition be provided. Should the court find the defendant to be the real father of the child, it enters a decree that the child is to all legal intents and purposes the child of the natural father and entitled to all the rights pertaining thereto.

Abuse of Children.

A man who cruelly assaults and beats a defenseless child merits the suspicion that he is either under the influence of alcohol or drugs, or that he is insane or degenerate. Such a man is not a safe person to be at large in the community.

Under the Kansas law (section 6403, General Statutes of 1915) the offense of assault of a child is still regarded as only a misdemeanor. The

* “The result of two separate tests leads to the conclusion that not more than 20 percent of the unmarried mothers cared for by the obstetrical service of ——— General Hospital may safely be pronounced normal.” From *Mentality of the Unmarried Mother* by Jean West, Asst. Director, Psychological Clinic.

† Girls from neighboring states come to Kansas. Kansas girls go to Missouri, Oklahoma and Colorado.

maximum penalty is a fine of \$250 and imprisonment in the county jail for a term not to exceed one year.

Inadequate as this statute is, in actual practice the offender may be let off with a very much lighter sentence if he is apprehended by the police and brought to trial in a police court. Although the district court has concurrent jurisdiction, the county attorney as a rule does not prosecute a man who has already been convicted in police court on a charge of this nature.

Attention was called to this unfortunately common method of procedure and to the inadequacy of the present statute by the case of Ollie Bussy, who was arrested and convicted of cruelly beating an eighteen-months-old baby. Competent testimony established the fact that the child had been most outrageously and atrociously assaulted. The judge imposed a fine of \$100, the maximum penalty under city ordinance 1203, Revised Ordinances, City of Topeka, 1916. Upon investigation it was found that Ollie Bussy had had a long criminal record, and that at the time he was on parole from the penitentiary. He was returned promptly to the Penitentiary on violation of his parole.

Had Ollie Bussy not been on parole, and his parole not been revoked, the only punishment he would have received for the offense of beating a helpless baby would have been the \$100 fine. Had the county attorney also prosecuted him he might have received an additional fine of \$250 and imprisonment of not more than one year in the county jail, which altogether does not seem an adequate sentence for this crime.

What has happened in Topeka can happen elsewhere, and probably is happening. To brutally assault a child is such a heinous offense that whenever such cases come before the attention of the citizens or police they ought at once to lay the evidence before the county attorney in order that the offender may be given immediately the maximum penalty of the law.

Crimes against children aptly illustrate the inadequacy and incompetency of the present procedure in law as to the punishment of crime. The whole modern tendency of science is towards prevention rather than cure or punishment. The proper protection of children demands that the law keep abreast of science.

When Ollie Bussy committed his first offense in all probability he would have been recommended by a psychologist for permanent custodial care. Certainly after a proper examination into his mental condition he would not have been released from custody repeatedly, only to commit other and more serious offenses for which he must be retried and re-sentenced. The cost of such procedure undoubtedly is many times that of the preventive method, and furthermore so clumsy and inefficient that it ought not to be tolerated.

The remedy in the law may be through the establishment of a state bureau of mental examination, accessible to all courts, with provision in court for the appointment of a qualified mental examiner. When a mentally irresponsible person with criminal instincts is once apprehended he should be retained in permanent custody of the state. Such a procedure would prevent the majority of repetitions of offense and violations of parole which contribute to a long criminal record.

Care of Feeble-minded Children.

Feeble-mindedness is an inheritable defect. No normal child ever has been born to feeble-minded parents. If one parent is feeble-minded and the other is normal the child has about an even chance of being feeble-minded or apparently normal. This normal child, however, transmits feeble-mindedness to his offspring, and a certain percent of them will be feeble-minded.

To permit a feeble-minded or otherwise mentally irresponsible person to have offspring is a rank injustice to the child, to the parent and to the state. Common justice and fairness demand that a feeble-minded child or child of mentally irresponsible persons, having once been born, be given every opportunity for the fullest possible development of his feeble talents. This is necessary to make him self-respecting and self-supporting, and to give him a small measure of happiness which is a poor enough return for the injustice already inflicted upon him.

The legislative committee of the Kansas Commission on Provision for the Feeble-Minded investigated the existing legislation regarding feeble-mindedness in this state. The following is an excerpt from their report. A full report of the Commission will be published later:

"Session Laws, 1881, chapter 35 (section 9671, G. S. 1915), established an institution for the education of idiots and imbecile children, to be denominated the 'Kansas State Asylum for Idiotic and Imbecile Youth.' Session Laws, 1909, chapter 233, changed the name of the institution to the 'State Home for the Feeble-Minded.' The institution was originally intended to be a training school for these unfortunate children. As there has been no sufficient provision for educating such children as might be trained, it has been permitted to become a custodial asylum for low-grade feeble-minded.

"A larger appropriation is necessary to provide a modern training school at Winfield and to establish colonies in order to segregate properly the various grades of feeble-minded into such groups as would best facilitate their training and care. In connection with this training school a properly equipped medical and psychological clinic should be established to give these children the most favorable classification and treatment. If this were done, parents of mentally backward or feeble-minded children would cheerfully send their children for such special training as they require, just as parents now send their children to the State School for the Blind or Deaf. This would better the condition of the children and relieve the communities of hundreds who are now a drag in the school room, who exercise a degenerating influence on the younger children with whom they are associated, and who, as they grow older, constitute a steady and constant stream of petty criminals.

"Admission to the Winfield institution is now on application of parent or guardian. There being no commitment law in the state, no court has the authority to commit a feeble-minded person, even though he may be a public nuisance or menace.* Frequently it happens that the parent or

* Section 6098, General Statutes of 1915, provides for inquiry to be made when verified information in writing is given that any resident of a county is insane, a lunatic, an idiot, an imbecile, a feeble-minded person, drug habitue or habitual drunkard, and for any of these reasons is incapable of managing his affairs.

Section 6100, General Statutes of 1915, provides that if the jury impaneled to try the case finds that the person is insane, a lunatic, an idiot, an imbecile, a distracted person, a feeble-minded person, a drug habitue, an habitual drunkard, or one incapable of managing his affairs and in need of a guardian, the court may, if it finds that such order is necessary, appoint a guardian of the person or estate of such person, or both, as the circumstances of the case may require.

Section 6107, General Statutes of 1915, provides that every probate court by whom

guardian (if he be a relative) of the feeble-minded person is of such low-grade intelligence that he himself is a proper person for custodial care. The absurdity of the lack of proper commitment power by the courts immediately becomes apparent.

"The legislative committee therefore recommends:

"*First:* That the name of the State Home for Feeble-minded be changed to the State Training School, and that sufficient appropriation be made to restore the original purpose of the institution.

"*Second:* That a proper commitment law for feeble-minded be enacted, enabling the state, when the best interests of society or the individual demand to transfer a feeble-minded child or adult to this institution.

"Such legislation, and sufficient appropriation to carry it out, both as to the letter and the spirit of the law, would enable Kansas to care for the feeble-minded in a scientific manner, and in the way demanded by modern ideas for the care of these unfortunates."

Physical Inspection of School Children.

Before starting on a long journey the careful automobilist makes certain that his machine is in perfect condition for the trip. Even starting with a perfect machine, a long trip is likely to bring out or develop unsuspected defects. Just as logical as the careful inspection and repair of an automobile preparatory to a trip is the examination and treatment of the defects of a child before starting to school each year. A parent or guardian of a school child needs to be certain that the child can see well, that he hears well, that his teeth are good, and that he is free from defects which will interfere with his health and school progress.

But granted that a child starts to school in perfect condition, a parent has no assurance that his child will not come in contact with children who have not had such care. Neither has he any assurance that his child will not be exposed to contagious diseases or to conditions which may be attended with unpleasant if not dangerous consequences. The majority of all children attending school are without proper protection from the spread of communicable diseases, and their minor physical ailments are undiscovered and neglected. Only a few states and a few large cities have made legal provision for periodic inspection of school children, and still fewer of them are providing adequate methods of treatment. This legal protection should be extended with all possible rapidity until every child in the country is thus safeguarded. No parent can feel secure as to the health protection of his own child until all the children with whom his child comes in contact are also protected from contagion and from all conditions coincident with school life which affect the health of any child unfavorably.

Sections 9099 and 9100, General Statutes of 1915, provide for the expenditure of school funds for dental inspection in cities of 40,000 or over. These sections should be enlarged to permit all school boards to use school funds for the employment of school nurses, doctors and dentists, for the establishment of school clinics, and for such other measures as will insure the complete protection of all school children.

any such person is committed to guardianship may make an order for the support, care and safe-keeping of such person. In this roundabout way the guardian and the probate court may send the person to Winfield.

Marriage.

The prevalence of divorce and the numbers of children of ill-considered and unfit marriages, handicapped at the start by mental, physical and economic limitations, compels the conclusion that marriage is not adequately safeguarded by law.

Many of the spur-of-the-moment and ill-advised marriages would be prevented if the statutes required a five days' notice for the issuing of the marriage license. Several of the states already have legislation along this line.

Wisconsin requires that not less than five days previous to persons being joined in marriage a license shall be obtained from the county clerk of the county in which the female resides, or if not a resident of the state, then from the county where the marriage is to take place in the state. In addition Wisconsin requires a health certificate certifying that the male applying for the license has been examined with fifteen days prior to application for license to marry, and is free from venereal disease. Massachusetts and New Hampshire also require a five days' notice for a marriage license.

The Missouri children's code commission recommends that common-law marriages be abolished, and that there should be an interval of five days between the application for a marriage license and its issuance. The marriage of feeble-minded, epileptic and insane is already prohibited.

Kansas forbids the contracting of marriage within prohibited degrees of relationship. It also forbids the issuance of a license to epileptics unless the female is over forty-five years of age, and the marriage of the insane, but there is no provision for the necessary supervision as to make these laws effective. Ultimately Kansas should provide that no marriage license may be issued until both parties present certificates of mental and physical fitness for caring for themselves and their progeny, and in every case there should be at least five days' notice of the intended marriage.

Compulsory Education and Child Labor.

According to the federal census of 1910, 6,857 Kansas children between the ages of ten and thirteen are at work. The undesirable character of jobs offered to children who leave school early causes them to change their employment constantly. By so doing they acquire habits of shifting, which habits are not only hard to overcome, but leave an undesirable mark on their character.

Every year 23,000 American children between the ages of nine and fifteen are injured, crippled or lose their lives by playing in other dangerous places and by accidents in industry. In addition to the direct injuries to the young child in industry, he is likely to be so injured in body and so stunted in mind by the long hours and unhealthful conditions that in later life he finds it impossible to compete successfully with the more fortunate workers who were protected in childhood.

The federal child-labor law, which offered direct protection to more than 150,000 children, was recently declared unconstitutional. These children are now without any protection except such as their respective states afford them. Perhaps one of the best protections against child labor and its attendant degenerating influences on childhood is a good compulsory education law rigidly enforced. The census of 1910 reports 28,968 illiterates over ten years of age in Kansas.

Section 9415, General Statutes of 1915, provides that every parent, guardian, or other person in the state of Kansas having control or charge of any child or children between the ages of eight and fifteen years, inclusive, shall be required to send such child or children "to a public school or a private, denominational or parochial school, taught by a competent instructor, each school year for such period as said school is in session." The age limit in this section has been enforced heretofore to the fifteenth birthday.

The attorney-general gave an opinion May 28, 1916, on section 9415 as follows: "In my judgment it includes those (children) between their eighth and sixteenth birthdays. The language without the word 'inclusive' would include all children between their eighth and fifteenth birthdays, and it was evidently the intention of the legislature, by the use of the word 'inclusive,' to include those in the sixteenth year; otherwise the word 'inclusive' would have no meaning."

The attorney-general goes on to state in the same opinion that chapter 227, Session Laws of 1917, generally spoken of as the "child-labor act," controls and limits section 9415, since legally no child under the age of sixteen can be regularly employed in any of the occupations mentioned in the act unless he has the work permit, which permit he cannot have unless he has completed the course of study prescribed for elementary schools.

This opinion properly connects the two laws as they should be, and removes the discrepancy which has caused so much trouble in the enforcing of both laws. The state of Kansas is now in a position to put into effect at once a most modern law for the education of children. With the coöperation of parents, employees and school authorities, standards may be promoted which will further advance the welfare of Kansas children.

Adoption.

The best interests of children and of society demand that every child have a good home. Where a child is deprived of his natural home by reason of death or disability of his parents, the law provides means by which he may be taken by foster parents and become an actual member of their family, entitled to all the rights and privileges of a natural child.

In Kansas, section 6361, General Statutes of 1915, provides for the relinquishment of parental rights by the natural parent. In this section it is contemplated that relinquishment shall be had in the court of the county where the natural parent resides.

Section 6362 deals with the adopting parents, and provides that any person may go into the probate court of a county in which he resides and

offer to adopt a child. When the adopting parents live in one county and the natural parents live in another, the question arises whether an adoption proceeding can be split up, part of it being made in one county and part in another.

Section 6362 also provides that the "court shall investigate the matter," and if the probate court "on investigation finds the person offering to adopt some minor child is unfit or financially unable," such court shall refuse to permit such adoption to be made. The spirit of this section is clear, but there is no provision made in any section relating to adoption for the making of such investigation, other than for the judge to require such persons to appear before him for such personal inquiry as he is able or inclined to make.

Section 6369 provides that parents may relinquish their children to corporations authorized to receive children. This relinquishment is in writing, and the corporation acquires the legal custody of the child.

Sections 6369 and 6361 not being connected, child-placing agencies, wholly in good faith, have acted upon the assumption that section 6369 was sufficient by itself. This has led to difficulties in the way of proving inheritance to property, the court holding that adoption by contract between parties is not sufficient to make the child the legal heir of the adopting parties. (See 98 Kansas, 620.)

In a matter so vitally important as the relinquishment and adoption of children it is very necessary that the laws be so clear and concise that they leave no room for doubt or misinterpretation. An irregular adoption may lead to very serious difficulties in the inheritance of property and the establishment of other legal rights.

The investigation of possible homes for orphaned and destitute children, and the investigation of such children physically, mentally and socially as to their fitness for adoption into normal homes presents another very difficult problem. Neither the courts, children's institutions, child placing societies nor the state is at present equipped to undertake such necessary investigations as to prevent injustices to the children and the homes into which they are adopted. And under the present system it is not possible for such investigation and records as may have been made by one society, court or state to be made available to all the other societies, organizations or courts that may become interested in a given child or family.

The whole problem of supporting and educating the child wards of the state is at present in a chaotic condition. Helpless infants and children are being exploited in unlicensed boarding homes, or cared for in meagerly supported, badly managed, unstandardized private institutions, or consigned to the custody of state institutions which are not up to modern standards—institutions which are too prone to put an institutional stamp upon the child, institutions in which the same atmosphere of repression prevails that is found in penal, correctional and insane institutions.

The whole plan needs revision, so that it will become comprehensive enough to bring all helpless minor children under direct custody of the state, and organic and scientific enough that the state will be able to give every one of these potential citizens a square deal and assure itself of a definite unit of good citizenship.

Licensing Homes for Children, and Maternity Homes.

The statutes of Kansas require:

A license to run a private boarding house for adults; no license for conducting a private boarding house for helpless children.

A license to run a private hotel for adults; none for operating a paying institution for children.

A license to operate a private hospital for sick or insane; none for operating a private hospital for expectant mothers and their helpless babies.

In other words, the Kansas statutes specifically protect adults from insanitary surroundings and from being exploited, *but it makes no such provision for helpless babies and children in private institutions.*

Any incorporated institution in the state of Kansas must apply for and be granted a charter from the State Charter Board. The statute provides for the inspection by the State Board of Administration of private, charitable institutions receiving state aid (section 9586, statutes of 1915, and for those soliciting funds outside of their own county (chapter 132, Session Laws of 1911). The State Board of Health regulations provide that all state charitable institutions shall be inspected annually. *But there is no provision for one definite board, commission, or other central authority whose specific business it is to look after all institutions and societies harboring or caring for dependent children.* As a result, these inspections have been more or less haphazard and without any special directed effort of *one agency whose business it is to see that such inspections have been followed up, and that such orders as may have been issued are carried out.*

Reports of inspections of children's institutions on file with the State Board of Health are the best possible argument for the need of a strict license and supervision over all homes or institutions, public or private, harboring children or defenseless expectant women. Such license should provide for strict inquiry into the character of the person or persons applying for the license; evidence of the need or demand for the proposed type of home or institution; strict classification of inmates as to what ages, kinds and classes of inmates, and how many may be housed in a given home, and for such other requirements as may be necessary to assure helpless women and children decent surroundings and scientific and humane care. Specified provisions are very necessary to prevent persons suffering with tuberculosis, syphilis and other communicable diseases being housed with children, also to prevent children of tender age from being housed with confinement cases, or with aged indigents, insane, feeble-minded, police cases and other improper persons.

The license should provide for at least an annual or semiannual inspection, and for such further inspections as may be necessary by regularly salaried trained inspectors, such as are now employed by the state to inspect livestock, hotels, dairies and places employing labor. It should include the necessary authority to issue orders and provision for carrying them out. The license to operate an institution should be posted in a public place in such institution.

A health and hygiene license provided by the State Board of Health, together with the present regulation and license for solicitation of funds by the Board of Administration, will give a valuable double check on children's institutions, both public and private. With such regulation and supervision it would only be a question of time until all the better institutions could be strengthened and improved, while the improper ones could be made to clean up or get out of business.

Women and Children in Industry.

Because of the maternal functions, the protection of women in industry is even more important than the protection of men. The strain of continuous standing, bad hygiene and overwork, to which young women may be subjected in stores and factories, is responsible for such ill health as seriously interferes with childbearing functions. Protection of women in industry is necessary not only to safeguard the labor supply, but to conserve the nation's human resources.

The Kansas Industrial Welfare Commission, whose powers are set out in Chapter 108, General Statutes of 1915, establishes the regulation of hours, wages and sanitary conditions of women and children. This Commission has made regulations governing hours and wages for mercantile establishments, laundries and telephone companies. Just as soon as the necessary investigations can be made, the Commission will establish regulations covering other industries.

While the hours and wages for women vary with the degree of skill necessary to the occupation, the intent of the Kansas regulations is that women and minors shall be paid a living wage; that they shall not work too long hours, and that they shall work in sanitary surroundings.

In the process of the working out of any progressive measure, misunderstandings, minor injustices and complaints are likely to arise; also strenuous opposition from those who profit from exploited labor will be encountered. The rulings of the Industrial Commission are based on the theory that women and children are entitled to work in decently clean surroundings and for a living wage. If the industry cannot afford the cost of sanitary surroundings and living wages, neither can Kansas afford to allow her women and children to be used up to supply the deficit.

BULLETIN

OF THE

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Forward!

Guide right!

Keep the body sewers open.

"Give him air, he'll soon be well."—Shakespeare.

You can't go far if you don't keep fit!

Beware of the so-called "preventives for influenza."

"Mind your own business and you will soon have some to mind."

"The motion prevails," that the Don keep his influenza at home.

The state-wide closing order was drastic, but results justified the action.

**A victorious peace, restitution and retribution is demanded of the Hun:
no other terms will be satisfactory.**

**Kansas has an illiteracy rate of 2.7 percent, and yet there are people
who are not in this class, wearing asafetida bags around their necks, or
carrying a lump of camphor in their pockets, or contaminating the atmos-
phere with garlic or onion breaths as a preventive against influenza! Will
the janitor please open the windows wider.**

MORBIDITY REPORT FOR JULY AND AUGUST, 1918.

JULY.

AUGUST.

COUNTIES AND CITIES.	Typoid fever.	Smallpox.	Diphtheria.	Scarlet fever.	Measles.	Whooping cough.	Other diseases.
The State	322	114	4	77	74	67	327
Allen, except.	2	0	1	0	0	0	0
Iola	1	4	0	0	0	0	0
Anderson	5	3	0	0	18	18	29
Atchison, except.	0	0	0	0	0	0	0
Atchison city	0	0	0	0	0	0	0
Barber	0	0	0	0	0	0	2
Barton, except.	1	0	1	1	0	0	0
Great Bend	0	0	0	0	0	0	0
Bourbon, except.	1	0	0	0	1	1	3
Fort Scott	1	1	0	0	0	0	10
Brown	13	0	0	0	0	2	13
Butler, except.	6	1	1	0	2	5	12
Augusta	1	1	1	1	0	0	12
El Dorado	17	3	1	1	0	0	8
Chase	0	0	0	2	1	2	7
Chautauqua	1	0	0	0	1	0	1
Cherokee, except.	2	3	0	0	1	0	9
Galena	0	0	0	0	0	0	4
Cheyenne	0	0	0	0	0	2	0
Clark	1	0	0	0	0	1	0
Clay	0	0	0	0	0	0	1
Cloud, except.	3	0	0	0	2	3	2
Concordia	1	0	0	0	0	2	7
Coffey	1	0	0	0	1	0	2
Comanche	10	2	0	0	0	0	0
Cowley, except.	3	0	0	0	0	0	0
Arkansas City	1	1	1	1	1	0	6
Winfield	6	0	0	1	0	7	6
Crawford, except.	42	0	0	0	0	0	23
Pittsburg	5	1	0	0	0	3	5
Decatur	0	1	0	0	0	0	0
Dickinson	0	0	0	0	0	0	0
Doniphan	4	1	3	0	3	0	4
Douglas, except.	1	0	2	1	0	1	3
Lawrence	3	0	0	5	1	10	9
Edwards	0	3	0	0	0	0	0
Elk	2	0	1	3	0	0	4
Ellis	4	0	0	0	0	0	7
Ellsworth	0	0	0	0	0	0	9
Finney	4	0	4	0	1	4	0
Ford, except.	2	0	0	0	0	0	0
Dodge City	2	0	0	0	0	4	3
Franklin, except.	0	0	0	0	0	0	0
Ottawa	7	0	0	2	0	0	6
Geary, except.	0	0	0	0	0	0	0
Junction City	0	0	0	0	0	3	12
Gove	0	0	0	0	0	0	4
Graham	0	0	0	0	0	1	0
Grant	0	0	0	0	0	0	0
Gray	0	1	0	0	0	0	6
Greeley	0	0	0	0	0	0	0
Greenwood	0	2	0	0	0	0	7
Hamilton	0	0	0	0	0	1	2
Harper	0	0	1	0	1	19	12
Harvey, except.	0	1	0	0	1	0	1
Newton	0	0	2	0	0	1	0
Haskell	0	0	0	0	1	0	0
Hodgeman	0	0	0	0	0	0	1
Jackson	1	0	0	0	0	0	2
Jefferson	1	0	1	0	1	1	1
Jewell	2	0	0	1	2	0	3
Johnson	0	1	1	1	1	0	1
Kearny	0	7	0	0	0	16	0
Kingman	5	4	0	0	0	9	0
Kiowa	1	0	0	0	0	0	1
Labette, except.	1	0	0	0	2	3	21
Parsons	1	1	0	1	0	0	1
Lane	0	0	0	0	0	0	0
Leavenworth, except.	3	1	4	2	3	0	10
Leavenworth	0	1	7	1	0	0	34

MORBIDITY REPORT FOR JULY AND AUGUST, 1918—Concluded.

JULY.

AUGUST.

COUNTIES AND CITIES.	Typhoid fever.	Smallpox.	Diphtheria.	Scarlet fever.	Measles.	Whooping cough.	Cholera.	Typhoid fever.	Smallpox.	Diphtheria.	Scarlet fever.	Malaria.	Whooping cough.	Other diseases.
Lincoln.....	0	0	0	1	0	6	4	1	0	0	1	0	1	4
Linn.....	0	4	0	2	0	1	2	0	0	0	0	0	0	1
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia.....	3	0	1	0	0	0	0	5	0	0	0	0	0	1
Marion.....	12	1	0	0	0	6	1	6	1	0	0	1	0	3
Marshall.....	3	4	0	0	0	0	1	1	0	0	0	0	0	8
McPherson.....	1	3	1	1	0	0	1	1	0	0	3	8	5	3
Meade.....	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Miami.....	5	0	0	0	0	0	0	4	0	0	0	1	0	0
Mitchell.....	0	3	0	0	1	0	1	1	0	2	1	0	3	1
Montgomery, except Coffeyville.....	4	3	0	0	1	6	2	1	0	0	0	0	0	0
Independence.....	5	0	1	0	0	3	12	5	0	1	0	0	2	10
Morris.....	*						*							
Morton.....	3	0	0	0	0	0	2	3	0	0	0	0	0	0
Nemaha.....	2	0	1	4	0	0	0	1	0	0	1	0	0	1
Neosho, except Chanute.....	8	0	0	1	0	0	0	4	0	0	0	0	0	2
Ness.....	0	3	1	0	1	6	1	1	3	1	0	1	4	10
Norton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	1	0	0	2	0	1	1	1	0	0	0	0	0	0
Osborne.....	0	0	0	1	1	3	5	0	0	0	0	0	3	1
Ottawa.....	0	1	0	2	0	2	4	4	0	0	1	0	0	0
Pawnee.....	1	0	0	0	1	2	3	5	0	0	0	2	10	0
Phillips.....	4	0	1	0	1	1	0	9	4	0	0	0	2	0
Pottawatomie.....	0	0	0	0	0	6	5	0	0	0	0	0	3	4
Pratt.....	0	1	0	0	0	1	5	0	0	0	0	1	8	0
Rawlins.....	8	0	0	0	0	0	3	7	0	0	0	0	1	1
Reno, except Hutchinson.....	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Republic.....	1	0	0	0	0	0	0	2	0	0	1	0	0	1
Rice.....	4	3	1	2	0	1	15	7	3	2	0	0	1	16
Riley, except Manhattan.....	1	1	0	1	2	1	0	1	0	0	1	0	0	3
Rooks.....	3	0	0	0	0	1	2	4	0	0	0	0	0	0
Rush.....	0	0	0	0	0	10	0	0	0	0	0	1	0	0
Russell.....	1	1	1	0	0	0	48	2	0	0	1	0	0	5
Saline, except Salina.....	1	0	0	0	0	0	1	0	0	0	0	0	0	1
Salina.....	0	0	0	0	1	2	1	0	1	1	0	0	6	0
Scott.....	*						*							
Sedgwick, except Wichita.....	9	1	0	0	1	6	2	9	0	0	0	0	0	1
Seward.....	19	22	1	0	0	32	31	24	9	0	0	0	17	16
Shawnee, except Topeka.....	2	1	0	0	2	0	1	1	1	0	1	0	8	1
Sheridan.....	0	0	0	0	0	0	0	2	0	2	0	0	3	0
Sherman.....	15	4	1	6	6	15	13	23	0	3	3	6	2	26
Smith.....	0	0	0	0	2	0	2	0	0	6	0	0	0	1
Stafford.....	1	0	1	0	0	0	0	0	0	1	0	0	0	1
Stanton.....	0	3	1	0	0	0	0	0	0	0	0	0	1	0
Stevens.....	0	2	0	0	1	0	1	0	0	0	0	1	1	0
Sumner, except Wellington.....	*						*							
Thomas.....	0	1	0	0	0	0	0	5	0	0	0	0	0	0
Trego.....	6	0	0	1	0	5	1	2	1	6	0	0	0	4
Wabaunsee.....	0	0	0	0	0	0	3	0	1	1	1	0	0	2
Wallace.....	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Washington.....	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Wichita.....	5	0	0	0	0	0	1	2	0	0	0	0	0	3
Wilson.....	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Woodson.....	12	1	0	0	0	0	0	12	0	0	0	0	1	10
Wyandotte, except Kansas City.....	0	0	0	0	0	6	0	5	0	0	0	0	0	0
Rosedale.....	7	1	2	0	3	20	58	30	4	3	0	2	7	29

*No report.

Other communicable diseases in July: Cancer, 29; chickenpox, 12; dysentery, 8; erysipelas, 5; food poisoning, 6; German measles, 44; gonococcus infection, 281; malaria, 4; Meningitis, 3; mumps, 51; pellagra, 5; pneumonia (acute lobar), 10; poliomyelitis, 3; syphilis, 52; tetanus, 2; trachoma, 10.

Other communicable diseases in August: Cancer, 8; chickenpox, 5; cholera infantum, 6; Duke's disease, 1; dysentery, 1; erysipelas, 4; German measles, 14; gonococcus infection, 204; malaria, 3; meningitis, 7; mumps, 41; ophthalmia neonatorum, 1; pellagra, 6; pneumonia (acute lobar), 8; poliomyelitis, 4; septic sore throat, 2; syphilis, 51; tetanus, 3; trachoma, 8.

No A1 Nation with C3 Men.

"You cannot maintain an A1 nation with a C3 population."

"The most important workshop in the land is the home."

"Care for the health of the people is the secret of national efficiency."

"If the health of the country had been looked after properly, Britain would have one million more fighting men at the front."—*From Lloyd George's Manchester Speech.*

David Lloyd George, premier of Great Britain, in a recent speech at Manchester which ranks among the notable addresses of the war period, sounded a solemn warning to his country, which contains a message to the other nations of the world which are waging the conflict for democracy.

"You cannot maintain an A1 nation with a C3 population," the premier declared in emphasizing the fact that England's neglect of the welfare of its people is responsible for the physical deficiency of a great number of its men of fighting age. With the end of the war, he pointed out, the conditions which created this condition must be corrected through a general economic reform which will insure to every man and woman a comfortable home, good wages and broader opportunities, and so to every child health and the right physical and mental development.

MUST BE READY FOR PEACE.

Mr. Lloyd George's speech in part follows:

"As soon as the unseen hand casts the rainbow of peace on the skies we must be ready. And to be ready is summarized in one counsel. We must profit by the lessons of the war.

"The first lesson it has taught us is the immense importance of maintaining the solidarity of the British empire. The British empire has rendered a service to humanity the magnitude of which will appear greater and greater as this generation recedes into the past. It helped to stop the onrush of barbarism that was sweeping over Europe. It has held the unfenced highways of the world free for the armies of freedom to pass and repass. To permit such an organization to fall to pieces after the war would be a crime against civilization.

"The next great lesson of the war is that if the state, if Britain, is to be thoroughly equipped to face any emergency of either peace or war the state must take a more constant and more intelligent interest in the health and fitness of the people. If the empire is to be equal to this task, the men and women who make up the empire must be equal to theirs. How does Britain stand in the light of that test? We have done great things in this war. We could have accomplished greater if this country had been in a sound condition. War, like sickness, lays bare the weakness of the constitution. What has been ours? Let us talk quite frankly.

"We have had a ministry of national service set up in this country, and since then we have had the most carefully compiled statistics as to the health of the people, certainly between the ages of 18 and 42. That is the age of fitness and the age of strength. What has it revealed?

"You have the three grades—your A1, your B2, and your C3—and all I can tell you is this, that the results of these examinations are sufficiently startling—I do not mind using the word appalling. I hardly dare to tell you what it is in some parts of Lancashire. The number of B2 and C3 men throughout the kingdom is prodigious, so much so that we have half suspected the doctors. But there was a reëxamination, which did not make very much difference, and I apologize to the doctors here—for the first time.

WASTED ITS HUMAN MATERIAL.

"What does it mean? When you look at it, it means this—that we have used our human material in this country prodigally, foolishly, cruelly. I asked the minister of national service how many men we could have put into the fighting ranks if the health of the country had been properly looked after, and I was staggered at the reply. It was a considered reply. He said at least one million. If we had only had that number this war would have ended triumphantly for us.

"But here we are, combing out essential industries—there are questions as to whether you should put miners back or keep them in the army (a few tens of thousands); whether you should put a few thousands more into munition works. And yet you had one million men who, if the state had taken proper care of the fitness of the people, would have been available for the war. And the vigor and strength of the workers of this country have been unsatisfactory even in pursuits where all conditions are favorable to the development of a fine physique—agriculture. The results in agriculture have been almost as disappointing as in almost any other industry—a thoroughly healthy occupation of that kind.

"Everywhere a virile race has been wasted by neglect and want of thought for it. It is a danger to the state and to the empire.

"I solemnly warn my fellow countrymen you cannot maintain an A1 empire with a C3 population.

"And unless this lesson is learned the war will have been in vain. Our schooling has cost us dear, but if we make the best use of it I believe it will be worth it all in the end, even in the saving of human life.

"Care for the health of the people is the secret of national efficiency. It is the secret of national recuperation. With our machinery we take the greatest care. It is material. The way we look after it if the steel is defective through badly ventilated or ill-constructed furnaces or insufficient fuel! If the machine is inadequately oiled or looked after or overworked, if repairs are not done in time and done thoroughly—well, your machinery is no use.

"And man is the most delicately constructed of all machines. It is bad business not to look after the men, the women, and—if I may say so—above all the children.

"Now the most important workshop in this land is the home. And the quality of the steel in the national fabric depends upon the home. If it is unhealthy, ill-equipped, ill-supplied, ill-managed, the quality becomes defective and it cannot bear the strain.

"What are the influences that make for the health of the people? The first is the houses in which the people live. You cannot bring up a healthy people in unhealthy homes. Why, even those who rear animals will tell you that. The problem of housing in this country is the most urgent that awaits treatment. We have talked about it, we have played with it for forty, fifty years, but it has never been really taken in hand. It has only been taken in hand in the way an untidy or slovenly housewife takes up the cleaning of her house—just that part where the visitor can see.

MUST NOT HIDE THE EVILS.

"There has been too much of that in our cities. The slums, the bad houses—they are out of sight. That is not the way to deal with a problem which affects the strength of the nation. No government, no party has had the courage to grapple with it in the way a good business man would grapple with some sort of rottenness which he discovered in his business, and which was wasting his assets. He would not trifle with it; he would have the thing thoroughly searched out and put right. That is what ought to be done. It is equally true of the whole field of public life. We have had acts of parliament running into hundreds of sections; we have had regulations that would fill a library; we have had the most attractive pictures of model dwellings circulated, and we have had endless authorities. But you cannot plow the waste land with writing paper,

you cannot sweep away slums with paint brushes, and you cannot bind the gaping wounds of the people with red tape. That is our first problem.

"The next is this: There ought to be a more intelligent organization of the forces which have specially in charge the health of the nation—national, municipal, medical. We have enormous losses to make up. The crippled and the wounded must come first; but we must also think of the children who are to fill up the gap in the generation that is to come.

"The state must see that they are built up into a strong, healthy and vigorous people. There is no surer way of strengthening the country than that.

"What more are we to do to improve the life of the people? Wages during the war have been raised and we must see in the future that labor is requited with wages that will sustain life in full vigor. I am glad to see that in agriculture wages have gone up. There must be healthier conditions in the workshops. Many of them were admirable; many of them tolerable, many not tolerable. Bad health for the nation is bad business for all.

"There are times in the history of the world when nations take a great leap forward into the light. This is such a time. There is a great river in eastern Europe which, after meandering sluggishly through hundreds of leagues, finding a great barrier in its road, concentrates the whole of its strength to break through—rushes along and then merges into a sunnier land and into more fertile plains. That is the story of the national life of this country before, during and after the war. It has taken a great rush forward, and when it emerges from the rocks through which its torrents are now struggling it will deploy into a sunnier and a fairer land.

SEES THE STORM SIGNALS.

"The men who endure the discomfort, the terror, the torture in this mighty struggle have not gone through it all to reestablish more firmly in this land, for which they have fought, the dominion of slums; of wages that will not maintain, let alone cheer life; of confusion and disorganization, which creates waste, inefficiency, misery and squalor.

"But to enable the nation to bear the gigantic burden of debt which the war will impose upon it, and the still greater burden of recuperation and reconstruction, we must see that the national resources are developed to the full, and that the state renders all assistance in its power for the attainment of that object. Comfort is the surest preventive of anarchy, but comfort involves plenty. How can you insure plenty? By insuring the best conditions of production. If abundance is not there you cannot distribute it. That is an obvious truth which the Bolsheviks seem to have overlooked. The Bolsheviks began with distribution and ended with distribution. Production did not concern them. That is the surest road to national poverty, and it is the Bolshevik method.

"The state must help, the state must promote, the state must encourage production; it must remove hindrances to production; it must insure that confidence and security which is essential to production. There must be no shrinking from national organization, national production and national assistance.

"In my Welsh home we have an invariable method of ascertaining when the storm is coming. There is a lighthouse behind the western hills. When the weather is fair and settled you never see its light. But now and again it illumines the darkness, and you then know that the storm is coming. I have been scanning the horizon, and I can see flashes on the sky which indicate to me that there are grave atmospheric disturbances in the social and economic world. In the natural world you cannot with thinking avert the storm. In the more artificial world of human society you can, if you take heed in time, avert the hurricane. I give one advice to my countrymen, and I say it solemnly to them—take heed in time. And if you do we shall enjoy settled weather for the great harvest which is coming when the fierce heat of summer which is beating upon us in this great war will be over and past."—*K. C. Star.*

Do You Know—

THAT SYPHILIS

Has been estimated to affect 13 to 15 percent of the people in Paris, and that one authority records that 45 percent of the clerks and shopkeepers in Berlin are syphilitic?

At a conservative estimate, affects 10 percent of Americans?

Is the cause of locomotor ataxia and of paresis or softening of the brain?

Is the chief cause of apoplectic stroke in early life?

Is the cause of many cases of blindness?

Is the cause of nearly half the abortions and miscarriages?

Is transmitted from parents to children?

Affects all public women sooner or later?

THAT GONORRHEA

Is the commonest communicable disease next to measles?

Affects all ages and all classes of society?

Is very dangerous to the eyes and is the cause of 80 percent of the blindness in the new-born?

Is the cause of 10 percent of all blindness, 6,000 to 10,000 cases in the United States alone?

Is the cause of 40 to 50 percent of all surgical operations on the female organs?

Is the cause of many childless marriages and much invalidism?

Affects all public women very soon?

How Does Syphilis Affect the Brain?

The brain is made up of countless delicate nerve cells. These cells may be attacked and destroyed by syphilis years after all outward symptoms have disappeared. Since Nature will never regenerate these cells, those functions of the brain regulated by them will be destroyed. Twenty-five percent of the insanity of the United States has been traced to this cause.

Druggists are Enlisted.

The Iowa board of pharmacy, of Des Moines, recently mailed the following request to all druggists in the state:

"In keeping with the dignity of our profession, and to assist in the nation-wide campaign to curb the spread of venereal diseases, we would urgently request the druggists of this state to discontinue the sale of remedies for these diseases. It is our opinion, however, that very few Iowa druggists to-day encourage these sales, as humanitarianism with them is placed above their desire for personal gain."

Face Masks in Influenza Cases.

Influenza enters the body through the mouth or nostrils, and in no other way. The contagion is given off through the sputum and other secretions of the mouth and nose of the sick, and in no other way. It may pass from the sick to the well by coughing or sneezing in their presence, by kissing, or using towels, handkerchiefs, cups, glasses, spoons, or other household utensils in common.

The contagious factor may find lodgement in dust of the home, office, shop, sidewalk, or street, and from these reach the mouth or nostrils of the well and infect them.

It is obviously of first importance to prevent the infection from leaving the sick.

A new, simple, cheap and successful device has been developed. It is called a face mask. It is made of four thicknesses of plain unmedicated gauze, about four inches wide and six inches long, with a small tape or string sewed to each corner. It is just large enough to cover the mouth and nostrils, with allowance for shrinkage, and is tied back of the head with the four strings. It freely admits the air in breathing and prevents the escape of droplets in expiration, coughing or sneezing. If such a mask is promptly applied in the early stages of every case of influenza there will be little or no spread of the disease.

Attendants of the sick should also wear a gauze mask, but two or three ply of gauze is enough for a protecting mask.

The Young Man's Relationship to Girls.

The young man should think of all girls as the future mothers of the race, and understand that one of their most important functions in life is to become the mothers of healthy children who will make useful citizens. A nation may be well judged by its attitude toward women. The youth who is fair will treat every girl as he expects to treat his own sister.

In an accident at sea, when every one is anxious to reach the lifeboats, the rule for all men is "women and children first." If a man rushes in ahead of them, he is looked upon as a coward. It is more important for men to protect girls and women from other dangers, especially from those dangers which threaten to ruin their lives. Every man who has any principle believes in fair play. He despises cheating. The young man who is fair will adopt for his own life the same standard he demands of the woman he expects to marry some day. Each youth who grows up and marries becomes a link in a great chain of human beings. This chain reaches back into the past for thousands of years, and it may reach forward into the future for an even longer time. One false step may infect the racial stock and blight the lives of generations to come. If the young man keeps his body in good condition and lives a clean life, his descendants will in all probability be vigorous and useful citizens. The spark of life is to be accepted as a sacred trust to be transmitted undimmed to future generations.—*Public Health.*

Influenza.

The disease now spreading over this country is highly catching and may invade your community and attack you and your family unless you are very careful.

INFLUENZA is a crowd disease: *Therefore*, keep out of crowds as much as possible.

INFLUENZA probably spreads mostly by inhaling some of the tiny drop-lets of germ-laden mucus sprayed into the air when ignorant or careless persons sneeze or cough without using a handkerchief: *Therefore*, cover up each cough and sneeze.

INFLUENZA is probably spread also by the filthy habit of spitting on sidewalks, street cars and other public places: *Therefore*, do not spit on the floor or sidewalk.

INFLUENZA is probably spread also by the use of common drinking cups and the use of common towels in public places: *Therefore*, shun the common drinking cup and the roller towel in public places.

If you feel sick and believe you have "Spanish" influenza, go to bed and send for the doctor. This is important. Don't get up too soon. Your heart feels as tired as your legs, and needs rest.

In all health matters follow your doctor's advice and obey the regulations of your local state health officers.

All that has been said about "Spanish" influenza is true also of colds, bronchitis, pneumonia and tuberculosis. Do your part to keep them away.

Sleep in the fresh air, work in the fresh air, and if sick from any cause insist on fresh air.

The Doctor's There.

When in the cottage blessed with Love's sweet store
A babe is born, and o'er the rustic door
Is hung the crown of motherhood, and fair
Is all within—the doctor's there.

When 'neath the pall of mystic Death's weird spell
A mother's heart is broken by the knell
Of all that's dear, and on the stair
No baby feet—the doctor's there.

When virtue flees and breath of ruthless lust
Eats into the soul as does the gnawing rust,
When no one else with her the shame will share,
With mother's touch—the doctor's there.

Where blossoms Life's sweet Bud at blush of day,
Where breath of withered rose at eve-tide steals away
On the south wind—in joy and care,
An uncrowned king—the doctor's there.

—L. B. McBrayer, M. D., Asheville, N. C.

Damages for Illness Caused by Polluted Water on Steamer.

Damages totaling \$50,462 on account of typhoid and other sickness alleged to have been caused by drinking polluted water on the lake steamer *South America*, sailing from Detroit, have been awarded to eleven plaintiffs. The damages were fixed by William S. Sayres, jr., standing master in chancery, Detroit, Mich., after decision in favor of the plaintiffs had been rendered by Arthur J. Tuttle, judge of the United States district court. Other claims are pending. An appeal has been taken to the federal court of appeals. In his decision Judge Tuttle held that the evidence submitted proves beyond question that the typhoid cases were contracted while on the trip already mentioned. He referred the question of damages to the master in chancery.

It is alleged in the claims that after the steamer was thirteen hours out from Detroit it stranded in the Hay Lake channel of the Sault Ste. Marie river, and that after using up the water in the tanks aboard, impure water from the river was supplied for drinking purposes. The awards range from \$16,145 to \$305, some of the alleged victims having suffered from complications or sequelæ, and damages being granted to some for loss of time. The highest award was to Charles P. Moore, \$2,000; medical expenses, including trip for recuperation, \$1,546; business loss from June 15 to December 15, \$7,500; business impairment after return, \$3,500. To W. A. Malotte the award ran as follows: Medical attendance, \$721; pain and anguish and impaired health during sickness and in future, \$4,000; business loss, \$7,000; total, \$11,721. The award of \$306 was for doctors' bills, nurse and drugs for the infant daughter of Frank J. Campbell.

Calories.

Little Herbie Hoover's come to our house to stay,
To make us scrape the dishes clean and keep the crumbs away,
An' all us other children, when our scanty meal is done,
We gather around the fire and has the mostest fun
A-listenin' to the proteins that Herbie tells about
 An' the calories that git you
 Ef you don't watch out.

An' little Herbie Hoover says, when the fire is burnin' low,
An' the vitamins are creepin' from the shadows sof' and slow,
You better eat the things the Food Folks says they's plenty of,
An' gobble up the corn pone, an' veg-tables an' fish,
An' save yer drippin's an' yer sweets, an lick clean every dish,
An' learn to eat the war-bread, an' save up all the grease,
For less we eat of butter the sooner we'll have peace.
An' don't get fresh a talkin' of what you won't do without,
 Or the calories 'll git you
 Ef you don't watch out.

—Life.

Our Duty.

The following letter received by the State Board of Health from a North Carolina town tells the story of conditions that have been prevalent in all portions of the state:

"I had much trouble in getting nurses. The women were in a panic on account of the Wilmington trouble. They would go to the door with food but would not go in. Many of the cases were pitiable. I went out several nights and nursed myself among the very sick. One family of seven were all down at one time, and not a woman in the community would go in the house. They were practically dying for the lack of fresh air. I found every window closed, and there were seven people in the room. I threw the windows up and made them get into other beds; did the best I could for them. I wrote the inclosed lines upon the situation here, and it made some of these women stand up and take notice. Five volunteered as soon as they read it."

The lines referred to are as follows:

Into the cottage my Master went,
Where the dead and the dying lay;
He said to the man: "My strength is spent;
But nothing is gained where nothing is lent;
So I pray to God for a will unbent
Till the plague shall pass away."

The Master knelt by the trundlebed,
Where no one had knelt before;
And he said to the woman: "The child is dead;
'Twas sinfully sheltered and foolishly fed;
'Tis a curse, 'tis a curse on the cowardly head
Of those who have stopped at the door."

Said the man: "We have labored in horror and dread;
And we know not night from the day,
They came with their offerings of money and bread;
They were kind, but they touched not the poor
throbbing head;
They laid not their hands on the living or dead;
They were kind, but they hurried away."

Out on the street my Master cried;
Where the dead and the dying lay;
And a woman called from the further side,
To know if another child had died;
And the Master said: "You should go inside;
They will all be dead by day."

—N. C. Press Article.

Pills for the Kaiser.

"The Kaiser is afflicted with a most serious malady. Dr. Wilson says he must have medicine regularly and in large doses. It is a case of kill or cure. Every dollar contributed to the war chest and every dollar spent for the welfare and health of our soldiers and civilian workers is a pill for the Kaiser. It's up to you to see that the Kaiser gets his medicine."

Food Administration Has Not Indorsed Butter Mergers.

The United States Food Administration has not indorsed so-called "butter mergers" or other commercial devices for mixing milk with butter to make the latter "go farther." Agents and demonstrators appear to be seeking the indorsement of Food Administration representatives for such mixing devices. Because of the excess of moisture in the merged product, it is officially known as adulterated butter, and the process, which is purely mechanical, adds nothing to the food value of the ingredients. To make a high-class butter having satisfactory keeping qualities, good butter makers remove the buttermilk by thoroughly washing. Mixing milk of any kind with butter (except for cooking or immediate use) results in a product likely to become sour in a short time. Exploitation of butter mergers is apparently an attempt to take advantage of war conditions and public interest in conservation.

Here's to Hoover and Health!

POTATO SERVICE.

Eat potatoes and save wheat. Potatoes help to keep the blood alkaline. The tendencies of the average diet are acid forming. Bake the potato and eat the skin, but in the excitement of eating the skin do not forget the pulp.

IF.

If you can hold your head up while the others
Are drooping theirs from marches and fatigue;
If you can drill in dust that clouds and smothers,
And still be fit to hike another league;
If you can stand the greasy food and dishes,
The long black nights, the lonesome road, the blues;
If you can choke back all the gloomy wishes
For home that seem to spring right from your shoes:
If you can laugh at sick call and the pill boys,
When all the other lads are checking in;
If you can kid and jolly all the kill-joys,
Whose faces long ago forgot to grin;
If at parade you stand fast at attention,
When every muscle shrieks aloud with pain;
If you can grin and snicker at the mention
Of some bone play connected with your name;
If you succeed to keep your knees from knocking,
At thoughts of all the bullets you may stop;
If you can do these things and really like 'em
You'll be a reg'lar soldier yet, old top.

—D. H. W.

A Confession.

I am a murderer!

I play a safe game. I scatter disease germs in halls, in the street cars, wherever there is a crowd.

Few people suspect me. I am never detected.

I kill babies, children, grownups, impartially. Hundreds of hospitals filled with those I do not succeed in slaying.

Thousands of graveyards are filled with those with whom I have more success. I am ruthless and cruel. Yet I could be restrained if people really understood how much harm there is in me. Instead of that they think I am funny and laugh at me. Some of them even cry the German word for "health" when they hear me.

For I am a SNEEZE!—*Arizona Health Bulletin.*

New Styles in Men.

"To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition to national prosperity."—*Herbert Spencer.*

The new styles in men are very wholesome and attractive. Make no mistake—it is not the *uniform*, it is the *man*. The uniform helps. Its simplicity and its lines suggest manliness and health, but beneath the uniform there is muscle that is trained to work, there is a skin no longer pampered and sensitive to every chill breeze; beneath the jaunty cap there is a clear eye and a bronzed face that reflects a new spirit; there is in fact the "good animal" which Herbert Spencer claimed a man must be if he would be a good citizen.

We take pride in these things and we take hope for the future of the race, notwithstanding the tribute in men that we must pay before the waive of barbarism masquerading in a superficial "kultur" is turned back.

But the question arises: Suppose there had been no war, what would have been the ultimate fate of these men who only a few months ago were soft and pampered, slumping at the shoulders, wearing toothpick shoes, and many of them devoted to no serious purpose in life?

War is a high price to pay for such a lesson in man training, in physical education. Let us see to it that we get the full benefits of the lesson; let us make sure that the coming generations will not have to depend upon war for the great privilege of physical fitness and of manly ideals of bodily government.

History is filled with examples of national decadence following prosperity and world dominance. The early Roman legionary could jump fully armed into the Tiber and swim across it, but dominion slipped from the hands of his decadent descendants who loved to loll in perfumed baths.

Constantinople, the last foot of earth of the Eastern Empire, a really impregnable city, that had successfully withstood Solymán the Great, Amurath and other conquerors, finally yielded in 1453 to Mohammed the

Second, who was prepared and knew the business of war. Filled with pacifists and academic religious disputants, the city fell to Mohammed with his new heavy artillery, his highly trained janissaries and 258,000 Turks. The Turks have held it nearly five hundred years.

To the luxury and commercialism and pacificism of Byzantium we owe the burden of the Turk and the terrible sacrifice of Gallipoli.

—*How to Live.*

The Board's Roll of Honor.

The service flag of the Kansas State Board of Health now contains ten stars, representing the following members of the Board and personnel of the staff:

MEMBERS OF THE BOARD IN SERVICE.

Dr. Charles H. Lerrigo, captain ambulance corps No. 347, now in France.

Dr. Clay E. Coburn, captain M. R. C., now stationed at Automobile School, Kansas City, Mo.

Dr. O. C. Baird, captain M. R. C., at Fort Oglethorpe, Ga.

MEMBERS OF THE STAFF.

Prof. C. A. Haskins, chief engineer, State Board of Health, captain, sanitary corps of the Surgeon General's Department, now stationed at Washington, D. C.

Mr. N. F. Strachan, assistant engineer, State Board of Health, private, Twenty-third engineers, A. E. F., France.

Mr. A. H. Wieters, assistant engineer, State Board of Health, private, ordinance branch, quartermaster's corps, A. E. F., France.

Mr. G. H. Yeokum, assistant engineer, State Board of Health, private, coast artillery, A. E. F., France.

Prof. C. C. Young, director, Water and Sewage Laboratories, first lieutenant, sanitary division, U. S. A., Surgeon General's Department, instructor, Fort Oglethorpe, Ga.

Mr. James B. McNaugh, chemist, Water and Sewage Laboratories, first lieutenant, sanitary division, U. S. A., probably A. E. F., France.

Mr. Joseph E. Welker, acting chief engineer, State Board of Health, first lieutenant, sanitary corps, Surgeon General's Department, U. S. army, now at Fort Oglethorpe, Ga.

A considerable number of others of the department have been engaged in distinctively war work for the past year, but not of a character requiring enlistment in the military forces of the country.

All honor to these men who in response to their country's call have enlisted in its service, and have been thus willing to make the "great sacrifice." We are proud of them!

From the Firing Line "Over Here."

A recent issue of *Social Hygiene* notes that:

"Governor McCall, of Massachusetts, sent a special message to the legislature on March 14, urging that an appropriation of not less than \$30,000 be made for the work of the state department of health, subject to the approval of the governor and council, for the control, suppression and treatment of venereal diseases. The message included a letter from the state department of health to the governor, in which it is noted that the war and navy departments have appealed for aid in this work in Massachusetts as a result of investigations made in Bay State cities and towns by representatives of those departments of the government.

"Governor McCall declares it is no longer tenable to taboo mention of such diseases everywhere but in medical journals. He advocates fighting the venereal menace openly, courageously, and manfully. He says it is incumbent on the state to take measures against the evil."

INFLUENZA.

I cough, I sneeze,
I snort, I wheeze,
I'm in a perfect frenzy;
My head is dough,
My nose won't go—
I've got the influenza.

I shake, I ache
In every joint,
And every motion rends me,
Dog on the Don
That brought this on—
This Spanish influenza.

I kick the cats,
And break their slats,
And everything offends me.
I rip and roar—
Life's one big bore
When I have influenza.

I fill my skin
With everything
The pesky neighbors send me,
And vainly hope
With nasty dope
To cure this influenza.

But vain is hope,
And vain is dope—
Let angels come attend me.
I'll peaceful lie,
And a martyr die
Of Spanish influenza.

—C. A. Shively.

BULLETIN

OF THE

Kansas State Board of Health.

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S. J. CRUMBINE, M. D., Editor.

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November, 1918.

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A Parable, cover.

AVOID CROWDS!

The boys are coming home!

Sleep with your windows open.

Wash your hands before eating.

Eat some kind of fruit every day.

The great "German efficiency system" was yellow at the core.

Many people cough and sneeze in their hands instead of their handkerchief.

Insist that your neighbor obey the quarantine laws, after first obeying them yourself.

Never again must the State Department of Health be left without an emergency fund.

Educational pamphlets on sex hygiene are available for the asking.
Address State Board of Health, Topeka, Kan.

After the exchange of nose and mouth secretions by shaking hands, it is important, these influenza days, that you wash your hands before eating.

MORBIDITY REPORT FOR SEPT. AND OCT., 1918—Concluded.

SEPTEMBER.

OCTOBER.

COUNTIES AND CITIES.	Typhoid fever.	Smallpox.	Diphtheria.	Scarlet fever.	Influenza.	Whooping cough.	Other diseases.	Typhoid fever.	Smallpox.	Diphtheria.	Scarlet fever.	Influenza.	Whooping cough.	Other diseases.
Lincoln.....	0	0	0	0	4	0	3	1	0	0	0	251	0	4
Linn.....	7	0	0	0	2	0	3	1	0	0	2	219	1	3
Logan.....	0	0	0	0	0	0	0	0	0	0	0	30	0	0
Lyon, except Emporia.....	3	1	0	2	0	3	1	0	0	1	0	98	0	0
Marion.....	10	0	2	1	0	0	4	2	0	1	0	175	0	1
Marshall.....	3	0	2	0	5	1	7	4	1	1	1	578	0	11
McPherson.....	2	0	0	1	3	0	20	1	1	1	0	725	0	35
Meade.....	2	0	0	0	0	0	2	0	0	1	3	754	0	4
Miami.....	1	0	0	0	0	0	1	2	0	0	0	109	0	8
Mitchell.....	2	0	0	0	4	0	0	0	0	0	0	750	0	7
Montgomery, except Coffeyville.....	0	0	0	0	0	8	11	0	0	0	3	293	0	25
Independence.....	6	0	0	0	0	2	5	7	0	0	2	641	1	26
Morris.....	14	0	0	0	4	1	3	9	0	0	0	326	1	17
Morton.....	8	0	0	0	0	0	4	2	0	0	1	531	2	29
Nemaha.....	6	0	0	1	6	0	1	1	0	0	0	66	0	3
Nessho, except Chanute.....	1	0	0	0	0	0	0	1	0	0	0	13	0	0
Ness.....	0	0	5	1	4	5	7	1	0	0	1	161	0	4
Norton.....	0	0	0	1	0	0	0	1	0	0	0	63	0	2
Osage.....	2	0	0	3	2	0	1	2	0	0	0	63	0	8
Osborne.....	4	0	0	1	1	2	4	5	0	1	2	79	0	3
Ottawa.....	5	0	0	0	0	2	7	0	0	2	1	347	2	7
Pawnee.....	3	0	0	1	3	2	2	2	0	0	0	221	0	8
Phillips.....	3	0	0	0	0	1	2	2	0	0	0	162	0	0
Pottawatomie.....	7	0	11	0	1	0	2	0	0	2	1	286	0	4
Pratt.....	0	0	1	0	3	22	1	0	1	0	2	439	43	3
Rawlins.....	9	0	0	1	22	0	7	2	0	0	0	274	7	1
Reno, except Hutchinson.....	0	0	0	0	0	0	0	0	0	0	0	428	4	1
Republic.....	2	0	4	0	0	0	10	1	0	2	0	109	0	4
Rice.....	0	0	0	1	1	0	0	1	0	0	7	668	0	15
Riley, except Manhattan.....	6	0	0	0	25	0	4	0	0	1	0	245	0	3
Rooks.....	0	0	10(b)	0	3	0	2	1	1	0	4	579	0	4
Rush.....	0	0	0	0	3	0	14	0	0	1	0	228	0	2
Russell.....	0	0	0	0	0	0	0	1	0	0	0	306	3	29
Saline, except Salina.....	0	0	0	1	0	0	0	0	0	0	0	37	0	0
Salina.....	1	0	1	0	5	4	0	0	0	0	0	318	0	1
Scott.....	0	0	0	0	0	0	0	1	0	0	0	270	0	1
Sedgwick, except Wichita.....	0	0	0	0	0	0	10	1	0	2	0	21	0	0
Seward.....	8	1	0	0	0	0	0	3	1	0	0	522	0	0
Shawnee, except Topeka.....	33	2	1	0	4	4	87	12	22	3	0	37	0	1
Sheridan.....	4	0	0	1	0	0	1	2	1	1	0	237	0	4
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	2129	1	107
Smith.....	0	0	0	0	0	0	0	0	0	0	0	299	0	1
Stafford.....	7	0	2	4	6	3	11	3	0	8	4	157	0	1
Stanton.....	0	0	12	0	0	0	1	0	0	4	0	1558	1	10
Stevens.....	0	0	0	0	33	0	1	0	2	1	0	39	0	2
Sumner, except Wellington.....	0	0	0	0	1	1	2	1	0	0	0	343	0	1
Thomas.....	1	0	0	0	0	0	0	0	0	0	0	311	4	2
Trego.....	0	2	0	1	0	0	0	0	0	0	0	157	0	1
Wabaunsee.....	0	0	0	0	0	0	0	0	0	0	0	117	0	0
Wallace.....	6	5	0	0	3	6	1	1	0	0	0	923	0	8
Washington.....	0	0	0	0	0	0	0	0	0	0	0	483	0	9
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	114	0	1
Wilson.....	6	0	1	0	0	3	6	11	0	1	1	353	0	0
Woodson.....	4	0	0	0	2	0	0	3	0	3	0	121	0	0
Wyandotte, except Kansas City.....	2	0	1	1	0	0	1	1	0	0	0	32	0	0
Rosedale.....	15	1	9	1	4	4	78	6	2	29	2	105	0	2
	0	0	0	0	0	0	0	0	0	0	0	7	0	0
												496	0	11
												83	0	1
												193	0	16
												5102	13	132
												66	0	10

*No report. (a) 44 Diphtheria Carriers. (b) All Diphtheria Carriers.

Other diseases in September: Cancer, 17; chancre, 2; chickenpox, 24; dysentery, 8; erysipelas, 6; German measles, 7; gonococcus infection, 300; Impetigo contagiosa, 5; malaria, 4; measles, 20; epidemic Meningitis, 2; mumps, 71; ophthalmia neonatorum, 3; pellagra, 3; pneumonia (acute lobar), 40; poliomyelitis (epidemic), 9; septic sore throat, 1; syphilis, 104; tetanus, 2; trachoma, 22.

Other diseases in October: Cancer, 18; chancre, 5; chickenpox, 93; erysipelas, 9; German measles, 3; gonococcus infection, 164; malaria, 9; measles, 66; meningitis (epidemic), 4; meningitis, (influenzal or pneumococcal) 4; mumps, 55; pellagra, 1; pneumonia (acute lobar), 566; poliomyelitis (epidemic), 2; septic sore throat, 3; syphilis, 63; trachoma, 22.

Influenza in Kansas.

Influenza first made its appearance in Kansas during the present epidemic the latter part of September, at Camp Funston, where it raged for six weeks, with a fatality of 956 resulting from the disease and its complications. During the last week in September the disease began to appear in widely separated localities in the state, until by the beginning of the second week in October the whole eastern two-thirds of the state was in the throes of a rapidly spreading epidemic.

On October 12 the state-wide closure order was put into effect for a period of three weeks, with what seemed to be satisfactory results, if we compare the case rate and mortality rate with those of other states. There were reported to the Department of Health for September and October 46,248 cases of influenza, which is approximately 2.57 percent of our population. Making allowance for unreported cases there were probably 57,900 cases occurring in the state to November 1, which is 3.34 percent of the population.

While we are more or less uncertain as to the actual number of cases, we have rather definite information as to the number of deaths attributable to this disease. The following tables include pneumonia from all causes whatsoever, so that the figures are rather larger than might be warranted could we be certain that deaths attributed to lobar pneumonia were from other causes than influenza. October being one of the most delightful months of the year, with warm, sunshiny days, it is believed that few cases of pneumonia developed outside of the complicating influence of influenza. The tables are self explanatory:

Influenza and pneumonia deaths for the month of October, 1918, by color, sex and ages (exclusive of the deaths occurring at Camp Funston and Fort Leavenworth).

INFLUENZA.			LOBAR PNEUMONIA.		
Color.		Deaths.	Color.		Deaths.
White	.....	1,132	White	.....	508
Indian	.....	4	Indian	.....	8
Black	.....	52	Black	.....	33
Sex.		Deaths.	Sex.		Deaths.
Male	.....	652	Male	.....	326
Female	.....	536	Female	.....	223
Ages.		Deaths.	Ages.		Deaths.
Under 1 year	.....	47	Under 1 year	.....	21
1 to 2 years	.....	67	1 to 2 years	.....	24
3 to 4 years	.....	28	3 to 4 years	.....	12
5 to 9 years	.....	45	5 to 9 years	.....	13
10 to 14 years	.....	50	10 to 14 years	.....	19
15 to 19 years	.....	116	15 to 19 years	.....	55
20 to 24 years	.....	164	20 to 24 years	.....	75
25 to 29 years	.....	205	25 to 29 years	.....	91
30 to 34 years	.....	199	30 to 34 years	.....	103
35 to 39 years	.....	122	35 to 39 years	.....	50
40 to 44 years	.....	63	40 to 44 years	.....	34
45 to 49 years	.....	21	45 to 49 years	.....	11
50 to 59 years	.....	29	50 to 59 years	.....	17
60 to 69 years	.....	13	60 to 69 years	.....	10
70 to 79 years	.....	14	70 to 79 years	.....	6
80 to 89 years	.....	5	80 to 89 years	.....	8
Total	.....	1,188	Total	.....	549

	September.	October.
Total deaths from all causes.....	1,337	4,277
Deaths from influenza (exclusive of Fort Leavenworth and Camp Funston)	4	1,188
Deaths from pneumonia (exclusive of Fort Leavenworth and Camp Funston)	60	549
Deaths from influenza (Fort Leavenworth and Camp Funston)	1	319
Deaths from pneumonia (Fort Leavenworth and Camp Funston)	15	689
Total for pneumonia and influenza only.....	80	2,745
		80
Grand total, influenza and complications.....		2,875

Common Colds.

The most prevalent illness in the United States is the common cold, a disease group included under one name and considered of such minor importance that vital statistics do not record the enormous number of persons who annually are subjected to suffering, inconvenience and economic loss thereby. Remarkable as it may seem, the widespread familiarity with this condition has bred a contempt which hides its seriousness, yet when the sum total of the ravages committed by common colds is made, it becomes evident that instead of being a group of trivial affections, common colds must be classed as serious diseases.

The phrase "common colds," like "charity," covers a multitude of sanitary sins, and, curiously enough, the name has been applied to a group of affections which, far from depending absolutely on cold, are frequently the direct result of living in close, overheated surroundings having a lower relative humidity than the dryest desert known to man.

The word "colds" means an acute infection of the lining membranes of the nose, tonsils, throat and larger bronchial tubes. The process may be even more extensive and amount to a general infection of the entire body. All of the breathing apparatus excepting the smaller terminal portions in the lungs may be involved, and as a matter of fact the disease may, and often does, spread to these, thus producing pneumonia. In this connection it may be pointed out that pneumonia kills more people in the United States than any other disease excepting tuberculosis and heart disease. Many pneumonias begin as a common cold. Colds do not produce tuberculosis, yet unfortunately what is considered as a cold may be in reality the first symptoms of the white plague.

The causes of colds are multiform and not entirely understood. In every case, however, they are dependent upon the growth and activity of living germs, which are always received from other people. It is true that almost everybody harbors disease organisms in the mouth and nose, and that these, under favorable conditions, will produce a cold in their host. But these germs in every case were received from some other person. In other words, colds are infectious. It used to be thought that sitting in a draft or a prolonged stay in the swimming pool would produce

a cold. This is erroneous, but the chilling of the body which the draft produces and the weakening of the vital forces caused by too long a swim lower the powers of resistance and permit germs which have hitherto been harmless to their host to produce their disastrous effects.

It is not necessary to describe a cold. Everybody is familiar with it in all its variations, from the simple ordinary coryza, which is a polite running at the nose, to the sore throat, the aching chest, fever, and generally "knocked-out" feeling. The cough, the sneeze, the headache and the varying degrees of inefficiency which a cold produces are, alas, only too well known. Common colds occur in epidemics and are distinctly contagious. They sweep through an entire household, an entire city, an entire state, attacking the young, the adolescent, the middle-aged, and frequently carrying off the aged, the weak and the debilitated. Schools, factories, stores are suddenly crippled by epidemics of this sort, and the complications and serious disorders following the disease add to the great economic loss produced in this way. Infection of the cavities beneath the cheeks and brows, ear derangements, chronic lung infections, rheumatism, heart disorders, kidney impairment and depressed vitality may all follow in the train of this widespread infection.

To prevent a cold it is necessary, first of all, to keep the body resistance at a high point of efficiency. This means that the body machinery should be kept in good order at all times. Good, wholesome food in proper amount, plenty of sleep, the careful attendance to the voiding of the body wastes, the taking of regular exercise in the open air, keeping the body clean, keeping the mouth and nose clean, the avoidance of hot, stuffy, dusty rooms, the avoidance of exposure to sudden changes of temperature, the prevention of the chilling of the body either by cold or wet, are all protective measures. It should be borne in mind, however, that even robust persons may contract colds from people who have them.

The germs of colds leave the body in the secretions of the mouth and nose. They enter the body through the same route. Thus a careless sneezer and the person who does not cover his mouth and nose when he coughs are breeders of these infections. The little living bodies which cause colds are so small that a million could rest on the head of a pin. When a person coughs or sneezes a fine spray carrying with it untold numbers of these germs is spread into the surrounding atmosphere to a distance of several feet, and may easily be taken into the mouth and nose with the respired air. More direct contact, such as by kissing, the common drinking cup, the common roller towel, by pipes, toys, pencils, fingers, food, and other things which have been contaminated by the mouth and nose secretions of a person having a cold, may also carry the disease.

It is an obligation on the part of persons having colds to see to it that they do not spread these colds to somebody else. The person who neglects to cover his nose and mouth when he sneezes and coughs, the careless spitter, the person who permits his germ-laden discharges to contaminate things which are going to be handled by other people, is a menace to the community. If such a person uses public swimming

pools, if he is not amenable to reason and persists in distributing his infection, he should be avoided as a spreader of pestilence.

A good deal has been said about hardening people so that they will not contract colds. There is an element of danger in this, since to expose a weak person to the rigors of cold baths and cold drafts is apt to lower resistance, thus favoring the very condition which it is desired to avoid. At the same time it should not be forgotten that the Arctic explorer does not ordinarily have colds so long as he stays out in the open, and that it is not the engineer and fireman in the cold, drafty cab who have colds, but those who ride in the close, dusty, overheated coaches behind. When all is said, it must be admitted that dusty, unventilated rooms perhaps play the greatest rôle in producing colds.

Since colds are a serious condition, they should be treated as such. A great many people think that they have an infallible remedy for breaking up a cold. This may be harmless in itself, but usually it is not, and consists of a combination of harmful drugs and alcohol, the latter usually preponderating. The sufferer takes these preparations in large quantities, and if he is strong enough he may survive them and eventually get the best of the cold. Self-medication or medication by untrained persons is always dangerous. It is especially dangerous to those having colds, and should always be scrupulously avoided. As a rule, much time, inconvenience and suffering will be obviated by consulting an intelligent physician promptly. If this is not practicable a brisk saline may be taken and the patient put to bed. This gives his body an opportunity to regain its vitality and at the same time isolates him from other people. The sick room should be well ventilated and the windows opened so as to keep the air moving freely. It is also wise to moisten the air a little bit by putting a pan of water on the radiator or over the register on the stove. The handkerchiefs and bedding used by the patient should be sterilized by boiling. Kissing, and the use of drinking cups and towels, etc., in common with other members of the household should be forbidden, it being borne in mind constantly that colds are infectious and readily spread from one person to another.—*Massachusetts Bulletin*.

A War Department Lecture on Cancer.

In an earlier issue of *Campaign Notes* mention was made of an address by Major William J. Mayo, of the Medical Corps, delivered in a series of lectures on health subjects arranged by the Surgeon General for the benefit of the employees of the War Department at Washington. As reported by Frederick J. Haskin, the full address given by Doctor Mayo is now available, as follows:

"In the United States to-day there are more than 300,000 persons afflicted with cancer, and about 85,000 of these will die during the year. The most tragic part of this condition is the fact that more than half of these deaths are preventable, and half of the remaining fatal cases might have been cured by an early operation. For, while science does not yet know the nature of cancer, it does know the conditions which lead to its

development, and these conditions may in large measure be controlled. The terrible mortality from cancer is therefore largely due to ignorance.

"Cancer is an abnormal growth of tissue within the body. Certain cells in the embryonic stage fail to develop and perform their normal functions, and the multiplication of these useless cells form the tumor. What causes the cells to be checked in their normal development is not yet known, although there are several plausible theories. But the predisposing conditions which lead to this abnormal growth are known, and may be controlled.

"Thus cancer nearly always forms in some lesion upon the body, such as a wart, a mole, a bruised or infected spot. This lesion becomes irritated, and the growth of abnormal cells begins.

"The age of the individual plays an important part in susceptibility to cancer; for the common form of cancer is essentially a disease of later life, when some of the tissues have become weakened.

"In spite of popular opinion to the contrary, cancer is not an hereditary disease. Certain families may have tissues which develop cancer more readily than others; but this is only a small factor in the development of the disease. Since one out of every nine women and one out of every thirteen men die of cancer, it is not surprising that often several cases should occur in the same family.

"Equally fallacious is the belief that cancer is contagious, in the sense that it can be carried from one person to another, and there is no proof that it is contagious under any circumstances.

"Cancer is said by statisticians to be on the increase. Since the average human life has been lengthened about twenty years since 1860, the number of persons who are of the age most susceptible to cancer has been increased, and therefore the relative number of cases has grown. But there is no evidence that cancer is more prevalent now than ever before, in the sense that one is more apt to contract it. At the same time, the treatment of cancer is making cures constantly more frequent. The use of the X-ray in diagnosis was a great forward step. The so-called benign tumors are now often cured by a simple operation, while malignant growths are often successfully removed by more thorough operations.

"Certain occupations may lead to the contraction of cancer. Workers in aniline dyes absorb deleterious substances, which get into the urine and sometimes causes cancer of the bladder. Cobalt workers often have cancer of the lungs from the inhalation of irritating particles of cobalt, and workers in tar develop irritations at points where the tar comes into contact with the skin which may develop into cancer. Soot has an irritating effect on the skin, and the frequency of cancer of the groin among chimney sweeps is proof of this. Those who work in arsenic and its preparations sometimes absorb enough to overstimulate the skin, and cancer, especially of the hands and feet, may develop. Persons working with the X-ray often develop dermatitis of the hands, leading to cancer.

"There are several kinds of cancer, some of which attack the skin, mucous membranes and excreting glands, while others attack the bones, muscles and connective tissues. It is believed that in all of them some lesion, i. e., some point of irritation, is necessary before the cancer can form. It is probable that a majority of human beings are immune to cancer, that a lesser number possess a partial immunity, while a minority are without the protective agencies which render the lesions harmless. The condition of such persons is described as 'precancerous.'

"The lesions which may lead to cancer are classified as (1) congenital, (2) traumatic, (3) chronic irritative. The first class includes all sorts of moles, warts and benign tumors. The second includes injuries, such as bruises, wounds and burns.

"The third class includes all sorts of mechanical, chemical and infectious irritations, such as those caused by occupation, and is the greatest factor in the production of cancer. The potency of chronic irritation

in producing cancer has been proved in many ways. For example, in India there are cattle which pull loads by means of ropes passed through holes bored through the base of the horn. Cancer at the base of the horn is very common among these cattle, and is seldom seen in others. A Copenhagen scientist found that rats in certain American sugar warehouses frequently had cancer of the stomach. He learned that these rats ate a kind of cockroach which was infected with the parasite that irritated the stomachs of the rats, and he was able to produce cancer in other rats by feeding them on these cockroaches.

"There is abundant evidence that external cancer in man is nearly always caused by some sort of an irritation, and scientists believe that internal cancer may often be due to the same cause.

"In parts of China where the head is shaved by the public barbers, the razors used are often dull and full of nicks, and the irritation of this scraping often causes cancer. Chinese men suffer from cancer of the pharynx and esophagus due to their habit of eating very hot rice, which is thrown into the mouth forcibly with chop sticks. Chinese women eat after their lords and masters, when the rice is cold, and they never have this kind of cancer. In India much cancer is caused by the chewing of betel nut. In some parts of the country women do not chew the nut, and are free of cancer of the mouth.

"Cancer of the mouth in civilized countries has been greatly reduced by good dentistry. Eighty-five percent of the cancers of the lip occur in smokers. Formerly clay pipes, which became very hot, were much used, and there has been a notable reduction in the number of cancers of the lip since the clay pipe has gone out of fashion. Smoking, however, is the cause of most cancer of the lip, the tongue, and the floor of the mouth.

"In Khurdistan, India, the natives wear baskets filled with hot coals across their abdomens to protect them from the cold, and more than 50 percent of all the cancer in that region forms in the abdomen and groin, while in other countries such cancers are very rare.

"Gall stones, which cause a chronic irritation, are found in 85 percent of all cases of cancer of the gall bladder. Locomotive engineers and firemen frequently have cancer of the skin, due to exposure to the heat of the firebox. Cancer of the breast in women is believed largely due to the irritation of clothes, and especially of corsets. Among people who leave the breast uncovered, cancer of the breast is extremely rare.

"One-third of all the cancer in civilized men occurs in the stomach, although this is not true of animals or primitive people. It seems not improbable that the taking of very hot food and drink by civilized people may be the cause of this.

"One of the great difficulties in the treatment of cancer is the popular attitude towards it. Many persons believe that cancer is hereditary and carries a stigma with it. Hence many who have been operated upon and cured of cancer conceal the fact, and only those cases who die become known. This has resulted in an unjustified pessimism with regard to the possibility of curing the disease.

"The steps which the layman can take to protect himself from this disease are obvious from what has already been said. Causes of irritation should be avoided, and if the occupation makes this impossible, the possibility of cancer should be kept in mind, and the advice of a physician sought. Small tumors, moles, warts, abrasions and injuries which fail to heal should be closely watched and shown to the physician. Gall stones and ulcers should be treated as soon as they are discovered. If these lesions are not neglected cancer may be prevented, and if taken in the early stages it often can be cured. Ignorance and neglect constitute the greatest dangers."

Shaving Brushes!

(Bureau Circular Letter No. 186.)

TREASURY DEPARTMENT,
BUREAU OF THE UNITED STATES PUBLIC HEALTH SERVICE,
WASHINGTON, July 31, 1918.

To State and Local Health Authorities, and others concerned:

Inasmuch as there is no doubt that shaving brushes infected with anthrax are to be found in trade channels in the United States, administrative action is required. Regulations have been adopted which will prevent the further interstate shipment of infected brushes, but in order to protect the public in the use of shaving brushes already in trade channels, sterilization is recommended before use of all brushes made from material not sterilized in the process of manufacture. These are chiefly brushes made of horse hair with or without an outside layer of imitation badger hair.

For sterilization of brushes, the following procedure is suggested: The brush should be soaked for four hours in a 10-percent solution of formalin (by formalin is meant a 40-percent solution of formaldehyde). The solution should be kept at a temperature of 110° F. and the brush so agitated as to bring the solution into contact with all hair or bristles.

I shall be obliged to you for bringing this information to the attention of all those interested. Respectfully,

RUPERT BLUE, *Surgeon General.*

Cold Storage Rules.

In accordance with the rules of the State Board of Health and the United States Food Administration, all eggs offered for sale which have been held in cold storage must be plainly labeled with the words "cold storage" either upon the food itself or upon the container. The retailer shall display a placard plainly and conspicuously marked "cold storage goods" on the bulk, mass or articles of food. Any invoice or bill rendered for such goods shall clearly describe the commodities, using the words "cold-storage goods."

When any cold-storage goods are transferred from a container bearing the words "cold storage," or such food commodities are divided into smaller lots or units, the words "cold storage" shall be plainly and conspicuously marked upon the container, cartons, packages or wrappers to which they are transferred.

Stand Up Straight and Avoid Tuberculosis.

The first essential in the avoidance of tuberculosis of the lungs, or consumption, is to keep the lungs strong, so that if the germs are breathed they can do no harm. One of the most important things in keeping the lungs strong is to keep the chest wide open so that the lungs can be properly used. If the body is drooped or stoops, or if the shoul-

ders are allowed to drag forward (round shoulder), or if the head is carried forward instead of well back over the shoulders, the chest must be flattened, the breathing must be shallow, and the lungs, not being freely used, become weak. It is in this type of chest that tuberculosis usually begins. The consumptive is usually narrow-chested, with drooped shoulders and with the head craned forward. While the development of a strong, well-formed chest is one of the most important factors in preventing tuberculosis, the same thing is to be desired if the disease has once started. Not only should we live in the open, but we should stand up straight and learn to "throw a big chest," so that the lungs can grow strong and the fresh air be taken in. The runner, the singer, or any one who is obliged to make sustained effort, is taught to stand and sit with the chest high, so that the lungs can be used to the best advantage, and if every one would do the same thing there would be less tuberculosis because there would be fewer weak lungs.

A Practical Beauty Hint.

The use of cosmetics and other artificial aids to attractiveness is as old as the human race. To Darwin and students of anthropology in general, decorative applications were a feature of selection—of attraction and sexual selection. The cheek covered with rouge, the heavily elaborated eyebrow and the colored wig, it appears, originated at an early period among courtesans. It has been remarked that "time has taken the taint from the tint," and the wide employment of artificialities to-day would seem to indicate the truth of this observation. The host of advertised medicaments, the beauty columns which grace or disgrace almost every metropolitan newspaper, the display windows of the various department stores catering to a large feminine clientele, bear further witness to the fact. The average man of rational, clean mind does not approve of cosmetic innovations in his own feminine people. He would prefer to see these radical departures from the natural confined to the chorus lady and the public tangoist. The physician always warns against the use of cosmetic preparations, because most of them are dangerous. To him the natural and healthy has always seemed to be typical of beauty. Even the editor of the lay press, however, has seen the ridiculous in the beauty column, and the following satirical excerpt taken from a Southern weekly contains what is, in the opinion of *The Journal of the American Medical Association*, an ideal beauty hint: "For giving the face a good color, get one pot of rouge and one rabbit's foot. Bury them two miles from home and walk out and back once a day to see that they are still there."

The Old Roller Towel.

How dear to our hearts are the things of our childhood
 When fond recollections present them to view!
 The old district schoolhouse, the pail and the dipper,
 The same cud of gum which in turn we would chew.
 No fear of a microbe ever beset us,
 No state board of health interfered then at all;
 We bathed dirty faces in one common basin
 And turned to the towel that hung on the wall.
 The old roller towel, the stiff roller towel,
 The germ-laden towel that hung on the wall.

Of crash was this towel, in gen'rous proportion
 And never was changed more than once in a week;
 We turned it around and used it all over,
 And for a dry spot it was idle to seek.
 With use and abuse it grew grayish in color,
 Acquiring an odor exceedingly rank;
 By Saturday night it presented a surface
 As hard and unyielding as any inch plank.
 The old roller towel, the stiff roller towel,
 From which the fastidious foolishly shrank.

But now it is gone, vanished out of existence,
 By virtue of power which the board of health holds;
 No more can we bury our streaming wet faces
 Within its bacterial, dangerous folds.
 No longer we meet with the discolored banner,
 Which hung from a roller nailed up on the wall;
 On clean huckabuck, initial embroidered,
 We wipe away tears which intrusively fall
 For the old roller towels, the stiff roller towels,
 The germ-laden towels that hung on the wall.

—Georgia White, in the *Randolph Herald*.

How Do They Stand It?

A question which recurs again and again in the minds of the middle-aged and the thoughtful is how our semiclad young women manage to endure the present inclement weather. A recent morning, when the temperature made the zero mark seem like a warm wave, a miss entered a Woodward car wearing a chiffon waist, with a cameo brooch as a chest protector. She recalled "fair Inez," whose

"—— dress was very thin,
 And any one with eyes could see
 Her white and tender skin."

Add the exposed throat and chest, with the thin-soled shoes and the thinnest of silk lisle hose, and with the total absence of petticoats—for no self-respecting dressmaker will fit a gown over a petticoat these days—and we have a style of dress more appropriate for Palm Beach than for Detroit in February—and one also entirely unsuitable for street or office wear.

The fight against the "white plague" is being urged with energy in

this and other cities, and through the lack of proper clothing that fashion decrees we are furnishing recruits for tuberculosis hospitals. We hear harrowing stories of half-clad children in fireless homes, and our hearts and money go out in pity, but we send our girls from the almost tropic warmth of our steam-heated houses to the arctic temperature of a street car—a more dangerous exposure.

What will be the outcome? We shall learn that through an increasing number of nervous invalids, through the death rate, and the next generation when we shall have a crop of children of low vitality and need nerve hospitals.—*Exchange*.

Eyestrain and Crime.

A San Francisco school teacher, who had suffered much from eye troubles herself, at one of her visits to her oculist's office described an incorrigible child in her school who appeared to have some defect of sight. This suspicion had been repeatedly reported to his parents, but as they were poor as well as ignorant, nothing had been accomplished so far. She decided, therefore, to make an independent effort in the boy's behalf and solicited the assistance of her oculist's aid. There were doubts of any good accomplishments being possible, as the boy seemed both extraordinarily dull and superlatively mean. His teacher said that at the age of eleven years he was the worst child in her experience of many years in school work. He frequently played "hookey," associated with the worst boys of all ages, smoked cigarettes, swore like a trooper, and lied outrageously; besides, he seemed to take a stupid pride in learning nothing and thwarting all her efforts. The only physical defect noticed was that he held print unusually close to his eyes. Examination showed one eye had two-sevenths and the other one-fifth of normal vision.

The boy was dumbly indifferent in the beginning to the eye test, but after much labor and aggravation, lenses were placed before his eyes, giving practically perfect vision at once; then he showed symptoms of being almost human. The glasses were ordered and the case gladly dismissed. More than a year afterwards the doctor saw the teacher again and inquiries were made with misgivings. The report was jubilant and astounding. She said that after she procured the glasses and had gained consent for his wearing them, the child's transformation was rapid and complete. He had become the willing slave of the teacher, where before he seemed to resent her every interest in him; he never missed a day in school, where formerly playing truant was chronic with him. He was the head of his class now, where previously he was too dull to be classed at all; he had voluntarily stopped his numerous bad habits and had become the marvel of the neighborhood as well as the joy of his parents, and so on.

The explanation of this metamorphosis is simple and natural. The child was more than three-fourths blind and no one had known it. He could not learn because he could not see, and his eyes and head undoubtedly pained him when straining to see. His incorrect and ab-

surd answers made the other pupils laugh at and guy him, so he hated everything connected with the school, and in playing truant he met the worst possible associates and learned from them his notable array of vicious habits. When he put on his glasses he saw the world for the first time clearly and in comfort. He therefore was able to learn, and his ambition was aroused. Hence he loved schooling and the opportunity to show his real capability, and by regular attendance at school lost the bad companionship which was really responsible for his show of criminal tendencies. After the boy became the pride of the school his parents took an interest and aided him, where before they ignored so unlovable a child. A boy who at the age of eleven was the worst child in the school and neighborhood and was absolutely callous to all moral suasion would probably have developed into a criminal. It is no exaggeration, therefore, to say that the development of a dangerous breaker of law and order of an extreme type was prevented by a pair of glasses.

The Points of the Compass.

The accepted plan frontage of every house is north, east, south or west. The custom must be assigned to the architect and builder, to whom nothing appeals but right angles. The man who has the temerity to build otherwise is swiftly catalogued in the ranks of the "Knutt" family. It may be admitted that the urban dweller has an authentic excuse for following the plan, for city streets demand harmonizing appearances, and most of them have been established long before the contemplated dwelling. But after all, the aspect of the building is a purely relative one and one which the farmer or rural citizen may easily correct by proper planning of driveways. The idea is not original, and it may sound impractical on first thought, but from a sanitary point of view it would seem that a house facing half way between any of the cardinal points would be ideal. There would be no side of the building which would not be exposed to sunshine at some part of the day. Besides, prevailing winds in Kansas are rarely direct from north or south, but usually from or near the 45-degree angle, and a good breeze and ventilation are always available. Those who argue that winter winds would thus increase the cost of heating have another "think" coming. The large proportion of winter wind is from the northwest or northeast, and under this same plan only one side of the house is thus exposed to heat radiation and loss, while under the prevailing plan two sides are exposed. That stability of frames and timbers may be impaired by this direct blast is true, but after all, when a Kansas wind makes up its mind to move things, what difference does frontage make?

This reasoning may sound fallacious, but it is upheld by good hygienists, sanitarians and even some architects. With the harmonizing influence of angle drives, and proper placing of adjacent outbuildings, all incongruity as seen from the section line, quickly vanishes and owners and housewives will recognize superior advantages of the southeast or southwest front. The one good argument for maintenance of the present plan

is that people are very much people, after all, and custom is exemplified in the following story:

"Now, Harold," said the teacher, "if there were eleven sheep in the field and six jumped the fence, how many would there be left?" "None," replied Harold. "Why, yes, there would." "No," he persisted; "you may know arithmetic, but you don't know sheep."

A Toast to the Flag.

Here's to the Red of it—
There's not a thread of it,
No, nor a shred of it
From foot to head,
But heroes bled for it,
Faced steel and lead for it,
Precious blood shed for it,
Bathing it Red.

Here's to the White of it—
Thrilled by the sight of it,
Who knows the right of it,
But feels the might of it
Through day and night?
Womanhood's care for it
Made manhood dare for it;
Purity's prayer for it
Keep it so white.

Here's to the blue of it—
Heavenly view of it,
Star-spangled hue of it,
Honesty's due of it,
Constant and true.
Here's to the whole of it,
Stars, stripes and pole of it,
Here's to the soul of it,
Red, White and Blue.
—Anon.

"Knowledge is about the only thing lying around loose in this world that you can have all you are willing to lug away. Everything else is screwed down tight and the screw driver is lost."

"If you have any enthusiasm you'll be criticised. There are so many people who want to drift—and if you bump into them (mentally) they're annoyed."

Keep your nerve; if your heart is heavy, don't show it in your face. Climb over, go around or tunnel through your difficulties. Remember, the world loves the strong and resolute; it either pities or despises the weak.—*The Bee Hive*.

Parable of the Sower Up to Date.

1. Behold the cougher went forth to cough.
2. And when he coughed, some germs fell upon the sidewalk and the feet of the pedestrians came and gathered them up and carried them into their homes.
3. Some fell into nostrils that were hard and unfruitful, and forthwith a slight cold appeared. It was not worse because there was much opposition to them on account of the sterility of the soil.
4. And when the sun was up these colds were scotched, and because they had no root these colds withered away.
5. And some fell in thorny places, such as those that have an immunity, and in this wise they were choked out.
6. But others fell into good ground for them, and brought forth much disease; some an hundredfold, some sixtyfold and some thirtyfold.
7. Who hath ears to hear, let him hear, and go forth to the health department and view the great harvest of pneumonia, tuberculosis, la grippe and bronchitis, all of which is of record in the archives of the department.
8. Who hath ears to hear, let him hear that over 10,000 of our people were garnered during the year of our Lord 1917 from the seed of the cougher and sneezer, and now sleep with their fathers in their untimely sepulchres.
9. Be ye not of those who, having ears, hear not, and who, having eyes, see not those things, which we have herein set forth that so nearly concern their temporal health and salvation.
10. Muffle the cough, smother the sneeze and expectorate not in public places to the end that divers and grievous disorders come not unto thee, nor unto thy neighbor.
11. And remember now the teachings of the Health Department that thy days may be long in the land which the Lord thy God giveth thee.

—John Dill Robertson, M. D., in *Chicago Bulletin*.

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Be clean!

If it is impossible, do it!

"Let a little sunshine in."

"Be strong and of good courage."

The new year's industrial motto: "Let's go!"

The new year's health motto: "Slow up!"

"Don't monkey with the buzzsaw," or the Flu.

The people, in the mass, are insisting on better health protection.

Do you know if your baby is registered and his rights of citizenship thus protected?

"Early to bed" is the first and most important admonition in the treatment of influenza.

Economic reform awaits the transformation of willful men into men of good will.—Estey.

Did you read David Lloyd George's great address on "No A 1 nation with 3 C men," in the October BULLETIN?

The person who is always "taking a chance" will sooner or later be caught in the remorseless law of the averages of chance.

There were thousands of boastful people who were "not afraid of the flu," and who despised or neglected the ordinary precautions, who were claimed as victims of their own folly!

MORBIDITY REPORT FOR NOVEMBER, 1918.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.....	Diphtheria...	Scarlet fever..	Measles (morbilli)...	Ger. measles (rubella).....	Whooping cough.....	Chickenpox..	Mumps.....	Pneumonia (acute lob v.).	Poliomyelitis (epidemic)...	Influenza.....	Other diseases.
The State.....	88	48	118	90	46	5	129	62	24	433	1	40,875	227
Allen, except.....	0	0	0	0	0	0	0	0	0	2	0	164	0
Iola.....	0	0	0	0	0	0	0	0	0	2	0	93	1
Anderson.....	1	1	0	1	0	3	0	0	0	1	0	19	0
Atchison, except.....	0	0	0	0	0	0	0	0	0	0	0	255	0
Atchison city.....	0	0	7	1	0	0	0	0	0	3	0	308	1
Barber.....	0	0	0	0	0	0	0	0	1	0	0	183	1
Barton, except.....	1	0	1	1	0	0	0	0	0	12	0	286	1
Great Bend.....	0	0	0	0	0	0	0	1	0	12	0	295	0
Bourbon, except.....	4	0	0	0	0	0	0	0	0	3	0	177	2
Fort Scott.....	0	0	0	0	0	0	0	0	0	2	0	37	9
Brown.....	0	0	0	0	0	0	0	1	0	5	0	312	0
Butler, except.....	3	0	1	3	0	0	4	0	0	22	0	547	2
Augusta.....	0	0	0	0	0	0	0	0	1	6	0	47	3
El Dorado.....	6	0	2	3	0	0	1	1	0	8	0	395	3
Chase.....	0	0	0	0	0	0	0	0	0	0	0	74	0
Chautauqua.....	1	0	0	4	0	0	0	0	0	0	0	68	0
Cherokee, except.....	3	0	1	0	1	0	5	0	0	13	0	927	1
Galena.....	0	0	0	0	0	0	0	0	0	1	0	86	0
Cheyenne.....	0	0	0	0	0	0	0	0	0	0	0	60	0
Clark.....	0	0	0	0	0	0	0	0	0	0	0	171	0
Clay.....	0	0	0	0	1	0	0	0	0	0	0	261	1
Cloud, except.....	0	0	0	1	0	0	0	1	0	0	0	336	0
Concordia.....	0	0	0	0	2	0	0	0	0	1	0	347	0
Coffey.....	1	0	1	0	1	0	0	0	0	2	0	319	0
Comanche.....	1	6	0	0	0	0	1	0	0	1	0	63	0
Cowley, except.....	0	0	0	0	0	0	0	0	0	3	0	274	1
Arkansas City.....	0	0	2	2	0	0	0	0	0	19	0	417	0
Winfield.....	0	2	0	0	0	0	62	0	0	9	0	527	0
Crawford, except.....	0	0	4	0	0	0	2	0	0	42	0	1,810	2
Pittsburg.....	1	4	2	0	1	0	0	0	0	5	0	360	2
Decatur.....	0	0	0	1	0	0	0	0	0	0	0	97	0
Dickinson.....	2	0	0	3	0	0	0	6	0	0	0	361	0
Doniphan.....	0	0	1	2	0	0	0	0	0	1	0	422	0
Douglas, except.....	0	0	0	0	0	0	0	0	0	1	0	83	2
Lawrence.....	0	2	1	1	0	1	0	1	0	1	0	145	9
Edwards.....	0	0	0	0	0	0	2	0	0	3	0	111	0
Elk.....	1	0	1	0	0	0	1	3	0	8	0	145	0
Ellis.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellsworth.....	0	0	0	0	0	0	0	0	0	3	0	108	0
Finney.....	1	0	0	0	0	0	0	1	0	23	0	627	0
Ford, except.....	0	0	0	0	1	0	0	0	0	5	0	265	0
Dodge City.....	0	0	0	1	0	0	3	1	6	5	0	308	2
Franklin, except.....	1	2	0	0	0	0	0	0	0	0	0	110	0
Ottawa.....	0	0	0	0	0	0	0	0	0	0	0	196	0
Geary, except.....	0	0	0	0	0	0	0	0	0	1	0	115	0
Junction City.....	0	0	3	2	7	0	0	1	2	2	1	210	21
Gove.....	1	0	0	0	0	0	0	0	0	0	0	180	0
Graham.....	0	0	0	0	0	0	0	0	0	1	0	154	0
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	0	0	5	0	0	0	0	0	0	0	121	0
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	120	0
Greenwood.....	0	0	5	0	0	0	2	1	0	6	0	627	1
Hamilton.....	0	0	0	0	0	0	6	1	0	0	0	76	0
Harper.....	1	0	0	4	0	0	5	0	0	2	0	550	2
Harvey, except.....	0	0	2	0	0	0	0	0	0	0	0	186	0
Newton.....	5	0	2	0	0	0	0	7	0	0	0	43	0
Haskell.....	0	0	0	0	0	0	1	0	0	0	0	61	1
Hodgeman.....	0	0	0	2	0	0	0	0	0	0	0	34	0
Jackson.....	0	0	1	0	0	0	0	1	0	0	0	344	0
Jefferson.....	0	0	0	0	0	0	0	0	0	0	0	253	1
Jewell.....	0	1	0	4	0	0	5	1	0	2	0	190	0
Johnson.....	0	0	0	0	0	0	0	0	0	3	0	524	0
Kearny.....	0	0	0	0	0	0	0	0	0	0	0	111	0
Kingman.....	0	0	0	0	0	0	1	0	0	1	0	444	0
Kiowa.....	0	0	0	0	0	0	0	0	0	0	0	381	0
Labette, except.....	3	0	0	0	3	0	0	2	0	0	0	255	25
Parsons.....	1	0	1	0	0	0	0	0	0	2	0	57	7
Lane.....	0	0	0	0	0	0	0	0	0	0	0	35	0
Leavenworth, except.....	1	0	7	4	0	0	0	0	0	1	0	254	0
Leavenworth.....	0	0	1	1	0	0	0	3	0	3	0	184	21

MORBIDITY REPORT FOR NOVEMBER, 1918—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.....	Diphtheria...	Scarlet fever..	Measles (morbili)...	Ger. measles (rubella)....	Whooping cough.....	Chickenpox..	Mumps.....	Pneumonia (acute lobar).	Poliomyelitis (epidemic)	Influenza.....	Other diseases.
Lincoln.....	0	0	0	0	0	0	0	0	0	0	0	327	0
Linn.....	3	0	0	0	0	0	0	0	0	3	0	228	0
Logan.....	0	0	0	0	0	0	0	0	0	0	0	45	0
Lyon, except Emporia.....	0	0	0	0	0	0	0	0	0	0	0	185	0
Marion.....	0	0	0	0	0	0	0	0	1	0	0	355	0
Marshall.....	1	0	0	3	0	0	0	0	2	3	0	353	1
McPherson.....	1	0	2	0	0	0	0	0	0	0	0	537	2
Meade.....	1	0	3	0	0	0	0	0	0	5	0	622	0
Miami.....	2	0	0	0	0	0	0	1	0	5	0	92	0
Mitchell.....	0	0	0	0	0	0	0	0	0	0	0	374	0
Montgomery, except Coffeyville.....	5	0	0	0	0	0	2	1	0	0	0	484	2
Independence.....	3	0	3	0	1	0	2	2	0	1	0	589	0
Morris.....	11	0	0	0	0	0	0	0	0	17	0	313	0
Morton.....	0	0	0	0	0	0	0	0	0	2	0	409	7
Nemaha.....	0	0	1	1	2	0	0	0	0	0	0	70	0
Neosho, except Chanute.....	0	0	1	0	1	0	0	0	0	3	0	468	0
Ness.....	0	0	0	0	0	0	0	0	0	0	0	244	0
Norton.....	0	0	0	0	0	0	0	2	0	3	0	177	0
Osage.....	0	0	0	0	0	0	0	0	0	0	0	95	0
Osborne.....	0	0	2	2	1	0	0	0	0	3	0	157	0
Ottawa.....	0	0	0	1	0	0	0	3	1	5	0	159	0
Pawnee.....	0	0	0	0	0	0	0	0	0	1	0	464	0
Phillips.....	1	0	0	0	0	0	0	0	0	0	0	643	0
Pottawatomie.....	0	0	0	2	0	0	0	0	0	0	0	285	0
Pratt.....	0	0	3	0	0	0	11	0	0	4	0	260	0
Rawlins.....	0	0	0	0	1	0	2	0	0	0	0	351	0
Reno, except Hutchinson.....	0	0	0	0	0	0	0	0	0	0	0	394	0
Republic.....	1	0	2	0	1	0	0	0	0	1	0	334	0
Rice.....	1	0	0	1	1	0	0	1	0	8	0	235	0
Riley, except Manhattan.....	0	0	0	0	0	0	0	0	0	5	0	735	0
Rooks.....	0	0	1	2	11	0	0	0	0	4	0	1,531	6
Rush.....	0	0	0	0	0	0	0	0	0	0	0	662	0
Russell.....	0	0	0	0	0	0	0	0	0	4	0	713	0
Saline, except Salina.....	0	0	0	0	0	0	0	0	0	3	0	168	1
Scott.....	0	0	1	2	3	0	3	3	3	11	0	196	5
Sedgwick, except Wichita.....	0	0	0	0	0	0	0	0	0	0	0	151	0
Seward.....	1	0	0	0	0	0	0	0	0	1	0	147	0
Shawnee, except Topeka.....	1	0	0	2	0	0	0	0	0	2	0	379	0
Sheridan.....	1	0	0	0	0	0	0	1	0	0	0	47	0
Sherman.....	1	0	0	0	0	0	0	0	0	4	0	500	0
Smith.....	0	0	0	0	0	0	0	0	0	0	0	58	0
Stafford.....	1	0	0	0	0	0	0	2	0	0	0	192	0
Stanton.....	3	12	1	6	0	0	0	3	2	13	0	1,249	29
Stevens.....	0	2	0	0	0	0	0	0	0	0	0	240	1
Sumner, except Wellington.....	1	0	0	0	0	0	0	0	0	0	0	132	1
Thomas.....	3	0	7	2	0	0	3	0	0	1	0	1,009	5
Trego.....	0	0	2	0	0	0	0	0	0	0	0	65	0
Wabaunsee.....	0	1	1	0	0	0	1	0	0	0	0	27	2
Wallace.....	0	0	0	0	0	0	6	0	0	2	0	492	1
Washington.....	0	0	0	3	0	0	0	0	0	8	0	508	0
Wichita.....	0	2	0	0	0	0	0	0	0	0	0	7	0
Wilson.....	0	0	0	0	0	0	0	0	0	0	0	244	0
Woodson.....	0	10	1	1	0	0	0	0	1	20	0	1,167	1
Wyandotte, except Kansas City.....	0	0	1	0	0	0	0	0	0	0	0	739	2
Rosedale.....	0	0	0	3	0	0	0	0	0	0	0	91	0
	2	0	0	0	0	0	0	0	0	0	0	2	0
	0	0	0	0	0	0	0	0	0	0	0	139	0
	0	0	1	0	0	0	0	0	0	0	0	61	0
	1	0	0	0	0	0	0	0	0	0	0	65	0
	3	0	0	0	0	0	0	0	0	0	0	33	0
	0	1	3	0	0	0	0	0	3	0	0	703	0
	0	0	0	0	0	0	0	0	0	0	0	70	0
	0	0	0	0	0	0	0	0	0	3	0	262	0
	2	2	34	1	0	1	7	1	1	32	0	1,132	29
	0	0	0	0	0	0	0	0	0	0	0	0	9

*No report. Other communicable diseases: Cancer, 30; chancre, 3; erysipelas, 5; gonococcus infection, 128; meningitis (influenzal pneumococcal), 8; ophthalmia, 2; pellagra, 3; septic sore throat, 8; syphilis, 40; trachoma, 7.

Influenza.

It was a solemn and anxious conclave that gathered in Chicago on Monday, December 9, for the opening session of the annual meeting of the American Public Health Association. Most of the entire four days' program was devoted to a discussion of the devastating epidemic of influenza that has swept over the country from the Atlantic to the Pacific as a devouring pestilence, after having claimed its victims by the hundreds of thousands in Europe.

The most noted scientists, physicians and sanitarians in the country were there to contribute their knowledge, gained through research, experimentation and clinical experience, to the end that out of it all some general program might be evolved whereby the epidemic might be stayed, or, at all events, the frightful mortality lessened. After four days of critical study and analyses of all the data presented, the following suggestions were tentatively agreed to by a majority of those present:

First. That the real causative agent (the germ) of influenza is unknown.

Second. That the disease is intensely contagious, and the infecting agent in this epidemic unusually virulent.

Third. That it is undoubtedly spread through so-called "droplet infection"—that is, by the spray which comes from the mouth and nose in the act of coughing and sneezing—the germs floating off through the air and being inhaled by others; and by so-called "hand to mouth" infection—that is, by the hands of an individual becoming contaminated with the infecting agent, causing the disease by shaking hands with people who are infected, or by handling anything that is infected and afterward transferring the infection to the mouth, either directly or through the contamination of foods, drinks, etc., or through the use of contaminated eating and drinking utensils which have been used by some one who is coming down with the disease, or who is a carrier of the germs causing the disease.

Fourth. That there are probably so-called "healthy carriers of the disease," as we have positive evidence occurs in many other diseases, such as diphtheria, typhoid fever, meningitis, etc.

Fifth. That it is essentially a crowd disease; that is to say, the danger of infection is greater in crowds, because of the danger of droplet or spray inhalation.

Sixth. That there is no known remedy to prevent one's taking the disease if they receive a massive dose of infection.

Seventh. That there seems to be a relative immunity in people over 50 years of age; that is to say, people of that age seem to be less liable to catch the disease than young people are.

Eighth. That the age of greatest danger or greatest susceptibility seems to be between the ages of twenty and thirty-five.

Ninth. That a face mask, properly made and properly worn, seems to afford some protection against infection, and for carrier cases seems to afford some protection against infecting others.

Tenth. That the use of gargles, sprays, medicines, amulets, charms, onions, garlic, soda, or any other drug, food or charm, is utterly futile and valueless to prevent contracting the disease.

Eleventh. That the American habit of handshaking should be suspended during the progress of this epidemic—the military salute is suggested as an agreeable substitute; that indiscriminate kissing (except between lovers and husbands and wives) should likewise be suspended during the course of the epidemic, and it might, with profit to the public health, be suspended even beyond that time.

Twelfth. That general closing orders in the case of rapid and malignant epidemics are wholly and entirely justified as being the chief means for the control of the disease and the saving of human life.

Thirteenth. That states and municipalities should prepare for another epidemic next year, this note of warning being based upon the experience of former epidemics.

There have been up to the present time approximately 400,000 deaths in the United States from this disease and its complications!

Those who review these conclusions soberly cannot but be impressed with the gravity of the situation that is confronting the people of the state and other states in putting forth measures designed to control the epidemic and the formation of plans for the future relief of human suffering and prevention of death from influenza. At this conference there was but one bright ray of hope afforded, and that was along the lines of providing a vaccine designed to prevent in a large measure the complicating pneumonia so often following or accompanying the disease, and to reduce the fatalities from pneumonia if contracted.

Enough is known about the disease to offer the following suggestions, which it is thought will be of material assistance in avoiding contraction of the disease:

1. Avoid crowds as much as possible.
2. Keep your hands away from your mouth and nose.
3. Cough and sneeze into a handkerchief.
4. Always thoroughly wash your hands before eating.
5. Take plenty of sleep—on a sleeping porch, if possible, or in a well-ventilated bedroom.
6. Avoid excesses of all kinds, either in eating or drinking—particularly doing anything that will occasion undue fatigue, either mental or physical. In other words, "Lead the simple life!"
7. Keep the bowels open, the feet warm and the head cool.
8. Dress comfortably, but not too warmly; neither too scantily; it is a crime against nature to dress the way many young women dress during the winter months, and, incidentally, nature will exact the last farthing in payment for the violation of her laws—don't forget that!
9. Be courageous, be not afraid, but do not be foolhardy. The submarines of disease are still our formidable foes!

Influenza and Afterward.

War has claimed its thousands, but "flu" its tens of thousands! The signing of the armistice on the French front was an immediate stop to the slaughter of battle. The specter of war no longer stalks abroad to claim its daily toll of the flower of the world's young manhood. November 11, 1918, will forever be a memorable event in the calendar of the world's history, for it marks the date when the allied commanders gave the word for death by war to cease; whereupon all the world went frantic with delirious joy. But the universal joy as the result of peace was marred by the death toll of another enemy of mankind—influenza—whose emissaries work in hidden and unseen ways, who is just as ruthless as the Hun and as merciless as the Turk. The armistice for this enemy must be written in the laboratory, the execution of which will be accomplished in the hospital and home by that tried and trusted soldier and defender of mankind—the physician. A thousand laboratories with thousands of workers scattered over the world are working night and day that they may discover the hidden secrets of this enemy, and, having found them, put him to flight. It is confidently hoped that that day is near at hand.

How May You Know if You Have Influenza?

Well, ordinarily, there will be no doubt in your mind that something unusual has happened, if you are so unfortunate as to be infected with influenza germs. The attack is usually sudden in its onset, and characterized by more or less severe headache, backache and general body aches, with chilly sensations and a mounting fever. There is usually a sensation of soreness of the throat, although not severe, with more or less cough and a feeling of extreme prostration—indeed, in some cases almost to the point of a severe collapse. Of course, there are many mild cases in which these symptoms are not so pronounced, but ordinarily an attack of real influenza will leave its impression upon your own mind, as well as that of your physician, that it is something more than an ordinary cold or any of the other diseases of the upper respiratory tract. Frequently there is a profuse nosebleed, with an ingestion or a congestion of the eyes and other mucous surfaces. Some types of the disease take a form of so-called gastric or intestinal disturbance, or a disturbance of the stomach and bowels, characterized by more or less pain or diarrhea.

What Will You Do When You Catch the Influenza?

The first thing you should do, without a moment's unnecessary delay, is to go to bed, cover up warm, with heat applied to the feet and other portions of the body that feel chilly and cold, with thorough ventilation continuously, night and day, in the room. You should not leave the bed under any circumstances whatever. I desire to place all the emphasis possible on this point, as it is a crucial time, which may be, and often is, the determining factor as to whether or not you will have complicating pneumonia, which is so much to be feared on account of the heavy mortality therefrom. The getting up and chilling the surface of the body when you are perspiring—and in most cases there is generally a violent perspiration following the first high rise in temperature—is an exceed-

ingly dangerous procedure, and nothing, no matter how urgent, should tempt you to get out from under the covers at this critical stage of the disease. The second thing you should do after going to bed is to summon a physician, and having summoned him and received his advice, that advice should be faithfully followed.

In uncomplicated cases the disease runs a rapid course, the fever terminating the third day; hence the name sometimes given to the disease of "three-day fever." If it is important, as I have shown, that patients suffering from this disease go immediately to bed, it is equally important that they remain there for a number of days after the temperature becomes normal. It is just at this point where thousands of people have made the fatal mistake of getting up too soon, many of the complicating pneumonias and meningitis having resulted from a too brief period of convalescence in bed after the temperature became normal. While it may not be necessary in every individual case to remain in bed for five days after the temperature becomes normal, yet that is the safe thing to do. Convalescents will be restored more rapidly and time actually gained by prolonging the stay in bed for several days even after you feel completely well. "Safety first" should be the motto at this critical period of the disease. Thousands of young men and women have gone to their death from this disease because of the old-time notion that many people have that they can "wear a disease out." There never was a more grievous mistake. Wearing a disease out, or putting off the obviously needful care and treatment for a disease to a more convenient time or season, is another way of spelling disaster as applied to most diseases, but more especially to the one under consideration.

Caution and care in the treatment of a body after an attack of influenza is important, not only because you may thus escape immediate complications, but because, too, of the danger of reactivating old infections, such as that of tuberculosis. It is not unduly pessimistic to say that in all likelihood many thousands of cases of arrested or quiescent pulmonary tuberculosis will be reactivated and active processes started again by having passed through a siege of this disease with the inevitable lowering of body resistance. This reason, then, must be an additional one for taking plenty of time for the convalescent period. That old aphorism, "Make haste slowly," can be resurrected, dusted and put into practical use again with profit.

Finally, the course and termination of the disease depends quite as much upon you as upon your physician.

Contagion.

Little George had heard a great deal said about disease germs, such as tuberculosis, etc. One day the family were at dinner, and George wanted a drink of water. The tired mother said:

"Drink out of your uncle's glass, George; he is through eating."

The little fellow commenced to cry and said:

"I don't want to. I'm afraid I will catch the backache."—*Exchange.*

Our Knowledge of Cancer.

It is a curious trait of human psychology that while we accept with thanks a caution against slippery ice, a racing automobile, an ocean swim, and many hazards well known to involve mortal risk, custom and only custom rules against attention to the early signs of cancer. It is, therefore, the purpose and earnest endeavor of the American Society for the Control of Cancer, and all who are engaged in the campaign against malignant disease, to modernize the custom in this respect and to establish a premium on that wary intelligence which will permit an educated man or woman to recognize the approach of danger and take the saving steps in time. Dr. Alfred Russell Wallace once said that the nineteenth century had done more than all previous time in the pursuit of knowledge essential to human welfare, and had done less than any other time to make that knowledge available for human needs. The twentieth century begins with far more deliberate attention to this need. Intelligent people everywhere, and especially in America, are more and more inclined to apply the standard of utility to the products of science. In choosing among the lines of scientific endeavor we ask and demand that their relation to human welfare should be prominently considered.

Not long ago an eminent association of specialists in cancer research publicly declared its belief that the new and old knowledge of this disease is not effectively employed and that it is not necessary to know all about the nature and causes of cancer in order to limit its mortality. These scientists, before turning back to their laboratories to delve deeper into the mysteries of malignant disease, did not fail to discharge their immediate responsibility to the cause of human welfare. With whatever influence they possessed they urged the need of a country-wide effort to disseminate the present knowledge of cancer, both in the medical profession and among the people generally. This call was characterized by a tacit assurance to medical and lay enthusiasts that we are not about to witness the miracle of a universal cure for advanced cancer, but may accomplish almost as much through prevention and through early diagnosis and treatment. The society subsequently organized to carry on this campaign believes that every man and woman should be acquainted with the early signs of preventable and curable cancer, and that this knowledge when fully disseminated will very greatly reduce the number of deaths and the number of advanced cases.

There is much about cancer that is obscure. We do not know why the rebellious tissue cells grow wild and destroy their host. We may never know. Neither do we know the cause of gravitation or chemical affinity. These are ultimate facts about nature that are inaccessible to solution, but this ignorance does not prevent us from making considerable use of gravity and chemistry. What we do know about cancer are the conditions leading up to it, and the proper use of this knowledge is a very small part of the subject, but it is sufficient for the present to accomplish great results.

The fact of the greatest practical importance in our present knowledge of cancer is that the disease in its early stages is purely local and

can be successfully removed from the system by surgical means. In the second place, we know that irritation in many different ways plays a most important part in the development of the various forms of cancer. This knowledge gives an important direction to efforts toward prevention and cure. The sources of constant irritation to any part of the body should be removed.

In external cancer there is something to be seen or felt, such as a wart, a mole, a lump or scab, or an unhealed wound or sore. Pain is rarely present. Cancer inside the body is often recognized by symptoms before a lump can be seen or felt. Continuing indigestion, with loss of weight and change of color, is especially suspicious. Persistent abnormal discharge should arouse suspicion of cancer, particularly if the discharge is bloody. The early and hopeful stages of cancer are usually painless.

Knowledge of cancer is truly the power to save life. If all patients would seek examination and competent advice immediately on the appearance of signs suggesting cancer, and would submit to the simple and certain operation necessary to remove the disease, the number of cures would be enormously increased. Alert intelligence and courage replacing present ignorance and fear would save the majority of sufferers from this disease.

Why a Physician Should be Employed in Childbirth.

The Bureau of Vital Statistics has recently sent to each of the 2,379 physicians on the list reports showing that they reported on time during 1915, 34,870 births, while midwives reported 23,313, and 843 certificates did not say who attended the mother. The total births reported at the close of the year, including stillbirths, was 59,026. Delayed reports which have since come in bring the total for 1915 to 57,938 living and 2,608 stillbirths. This number will be still further increased, as efforts to secure all unreported births are never relaxed. Physicians attended, during 1915, 1,220 more births than for 1914, and midwives 73 less births. While childbirth is attended with some discomfort and risk, both of these may be very much lessened by the attendance of a skilled and conscientious physician. Those women who from force of circumstances, or from choice, depend upon the unskilled attendance of neighboring women—or of one of them, who, with more boldness and self-confidence than knowledge or equipment, announces herself as a midwife—are assuming risks which may suddenly and unexpectedly prove disastrous.

Formerly when the mother developed fever several days after the birth, people would say that she had "caught cold." Now we know that the fever is caused by infection with germs, which are everywhere present when absolute cleanliness does not exist. These germs gain entrance into the blood through slight tears and abrasions. Though we cannot always be certain how this is done, we know that infection occurs frequently in the practice of midwives, who, contrary to the instructions of the State Board of Health, make inside examinations with their uncleaned hands. No physician will think of handling a patient at such a time without the most careful sterilization of his hands. No midwife, unless she be a nurse

with hospital training, can be depended upon to do this in a proper and intelligent manner.

No woman has the moral right to subject herself at the trying time of childbirth to the necessary risk of sickness, accident, or even of death to herself or child, by employing, when she can possibly avoid it, any one except a physician trained by study and practice in the modern methods of prevention and treatment. This is one time when economy should not be the first consideration.

Our statistics show that physicians attend three-fifths of the births in Virginia and are frequently called to a large number of the difficult cases after the patients have been weakened by long and unwise waiting. In spite of that fact, the majority of the 383 deaths of mothers during confinement in 1915 occurred in the practice of midwives. Furthermore, because they knew nothing of rendering timely aid, when a minute's delay may mean the death of the child, midwives have about twice as many children born dead as have physicians. On the other hand, many infants whom midwives would consider dead are restored by the prompt use of artificial respiration and the like by trained physicians.

The warning of these statistics is plain: Every expectant mother should have the attention of a trained physician. If she is wise she will not wait until labor begins, but will have an examination made as soon as she is aware of her condition and will consult her doctor during her pregnancy. She should have the action of her kidneys tested at regular intervals; if she has trouble with her eyesight she should communicate that fact to the physician. In a word, she should remember that her health requires the most rigid and regular attention at the hands of a competent physician. If every expectant mother in Virginia would follow this advice the number of stillbirths would be greatly reduced and far fewer children would die from congenital debility.

Absolute necessity alone palliates the slightest variation from these rules. Where a physician cannot be had, even at a sacrifice, the expectant mother and her attendants should see that the midwife observes these rules:

1. She must never, under any circumstances, make an internal examination.
2. She must never give any medicine or "tea" except mild laxatives.
3. She must never attempt to attend any case where labor is unduly prolonged or complicated.
4. At the first sign of hemorrhage she must send for a physician.

If the eyes of the child become inflamed, with a discharge of pus, only the most prompt and energetic treatment of a physician can save the child from blindness.

Take no chances. Have a physician. Save your baby!—*Virginia Health Bulletin.*

Hey, Soldier!

(Distributed by the Tenth Division Medical Corps, Camp Funston, Kan., to soldiers discharged from service.)

How have you served Uncle Sam?

How have you served yourself? If you have served him well you are going back into civilian life cleaner than when you entered the United States service.

In the army Uncle Sam gave you your equipment. You had to take care of that—you had to keep it clean; he taught you how to keep it clean.

Now, do you think less of your body than you do of your uniform, your rifle, or your blankets? When you are again in civilian life you won't have your uniform, your army rifle or your army blankets.

But you will have your body.

Your responsibility to keep it clean and wholesome, untainted by disease, does not end with your putting on a sack suit; it is always with you.

Uncle Sam taught you how to protect yourself against germs and Germans.

You are responsible at all times for the health of your body—responsible to yourself, to your family, to the world, and to your children.

You had to keep fit to fight for Uncle Sam.

Now you've got to keep *fit to live* and fight for those who may be dependent on you.

And you will if you have the "Funston spirit."

You know that venereal diseases are the worst diseases in existence; that they cause more misery than any other scourge—you *must* protect yourself from them. You know that because Uncle Sam taught you, showed you, proved to you the truth about these life destroyers.

You are not going to forget!

You know the penalty of contracting any of these diseases. Though you will soon be out of military jurisdiction, you are always under the natural law of compensation, of cause and effect. Nature is a stern and just judge.

If you run afoul of the law, *you pay*, and those who come after you for generations suffer.

You cannot escape.

When you get out into the old life you are going to observe this law or suffer, and perhaps cause suffering and shame to wife and family.

It is up to you, soldier-citizen.

Are you going to shirk the responsibility?

Are you going to be one of the millions of clean men who will strive to wipe this blot from the country?

Uncle Sam expects you to be just as clean a man in civilian life as in the army.

And you're going to be! if you are the man you should be. Do your duty to yourself and to those who are to come after you.

Humidity in House Ventilation.

(Abstracted from article by E. P. Lyon, professor of physiology, University of Minnesota, published in *Minnesota Medicine*, December, 1918.)

Pure air contains four important gases. Usually three are considered—oxygen, nitrogen, and carbonic acid. But these are practically constant in amount, and for that reason do not enter into the subject of practical ventilation of houses where few people congregate. The fourth gas is water vapor—and on its exceeding variability, and on the exceeding variability of a fifth factor also often overlooked—the temperature—depends most of our trouble in securing the proper atmosphere in our houses.

To understand the relationships and effects of variations in the water vapor and temperature of the air is to understand modern ventilation principles; to ignore them is to insure complete failure.

Air varies in its capacity for containing water vapor according to its temperature. Thus at 0° F. it can hold .5 grain per cubic foot; at 60° F. it can hold 5.82 grains, or about eleven times as much. That it can hold this much more does not insure that it does hold that amount of water, or anything like it. The amount it *does* hold at any given temperature cannot be more than its capacity at that temperature, but is usually less—sometimes very much less indeed.

The reason is simple—the air, having a given capacity, may not have available to it a water supply sufficient to satisfy (or saturate) that capacity. Thus over the Sahara desert the air is hot enough to hold immense quantities of water vapor, but there is no water to be had. The same thing in principle, but not carried to such an extent, is found in our own country. In summer, the air being warm, has a large capacity; and free evaporation from our water surfaces gives a reasonable supply of water vapor. In winter the capacity of the air is reduced by the low temperature. The actual amount of water vapor is less also.

The proportion between the amount of water the air can hold and the amount it really does hold is the “relative humidity.” It is evident that .5 grain of water per cubic foot will represent 100 percent capacity at 0° F.; but the same amount of water would be but 10 percent of the capacity if the temperature were raised to 60° F.

The first principle which must be recognized is that the body must lose heat as fast as it produces heat; otherwise the temperature of the body would rise. Second, the ways by which the body loses its heat are by radiation and conduction and by evaporation, both of which are in turn regulated by temperature and the amount of water vapor in the air. The greater loss of heat is through conduction and radiation. The outside temperature must be cooler than the bodily temperature if radiation and conduction are to take place. Also if the air is already saturated with moisture there can be no more evaporation. A high humidity plus an outside temperature of 90° or more lowers the heat production as much as possible, but nevertheless is both unhygienic and destructive in its effects.

However, when there is not enough moisture in the air, the air is water hungry, and as a result the body loses more of its heat through evaporation. The air at a temperature of zero contains only a small amount of water. In winter, inside our houses, air of that temperature is raised to 70° without any proportionate increase in the water content, and the air becomes water hungry. Then the body loses more heat than usual through excess evaporation caused by the dryness of the air. To remedy the loss of heat the temperature of the surrounding air must be raised to counteract a loss through conduction and radiation, the normal method of greatest heat loss. There is but one thing which can be done to offset the effect of the dryness of the air, and that is to increase the amount of water vapor in the air. How can it be done? Not by the ordinary devices to be sure. It will require a gallon of water to evaporate enough moisture to establish a favorable relative humidity in an ordinary house. That, however, does not take into consideration the fact that the air in a room is renewed from ten to fifteen times, perhaps twenty-five times, in a day. Instead of a gallon, from ten to fifteen or more gallons will be required daily. The best commercial radiator humidifier can evaporate not as much as one human being. It would require thirty of the best type in a small house to evaporate ten gallons in a day.

A large surface of water exposed to the air, and a rapid renewal of air over the surface of the water, are the essential physical principles which must be recognized in any appliance for the production of water vapor. A set of ten or more trays thirty inches long, so arranged that the warm air rising from behind the radiator passes between the trays and over the water in them, when fastened to the top of a radiator will produce a humidity of 40 to 50 percent in one room, and will evaporate 3.7 gallons daily.

The ideal system of ventilation for an ordinary house would consist of a hot air furnace having no outside flue, but instead an ample cold return flue from every room to the base of the furnace. This would secure circulation. A number of broad, shallow pans, the water level in them being maintained automatically by connection with the city water system, placed just above the fire pot would supply the necessary moisture. The relative humidity of the house should then be kept above 40 percent and the temperature at 65° F.

Humidity above 40 percent and a temperature of 65° F. will occasion more comfort than a room temperature of 75° F. with a lower rate of humidity, for a humidity above 40 percent causes only a moderate and ordinary loss of heat from evaporation.

Won't Permit Use of Saccharine.

In spite of the pleas of certain manufacturers for a reconsideration of the rule prohibiting saccharine, the United States Department of Agriculture has refused to change the rule. No saccharine may be used in food products offered for sale to the public in Kansas.

A New Point About Ventilation.

The modern schoolroom, with its high temperature, dust, and dry, stuffy air, is recognized as a serious foe of good health. There are certain tough children who can stand the combination, but most of them are chronic sufferers from colds, catarrh and other troubles during the whole period when the windows are shut, from fall to spring. To a greater or less extent the modern dwelling house is subject to the same conditions in these days of furnaces and steam heat. Children do the best who live for the most part in winter in the big, sunny, well-ventilated kitchen, heated by the kitchen range and the air moistened by the steam from the kettle on the stove.

Boards of health and school communities have been studying how to make the air of the schoolroom more satisfactory. An interesting experiment has been tried in Syracuse. One of our interested readers, Mr. C. H. Leonard, of Providence, calls attention to it. The experiment is described as follows by Doctor Todd, of Syracuse, in the *New York Medical Journal*:

COTTON CLOTH AT THE WINDOWS.

"I wish now to call attention to an experience in ventilation made under actual conditions of life. In a close, stuffy, conventionally ventilated schoolroom, filled with body odors, occupied by pupils, restless, easily fatigued, hacking and coughing, and where it was not uncommon for one to faint, I placed wood frames covered with medium-weight unbleached cotton cloth in lower sash openings of five windows. Fifty square feet of opening were so screened. The restlessness, hacking and coughing disappeared. Instead of becoming easily fatigued, the pupils showed increased energy, did better work, and discipline was easier to maintain. Summer school in Syracuse, in which I tried this out, is now fully equipped with fresh-air screens in every classroom, hall and cloak room. There are seventy-eight windows screened, with a total of 645 square feet, through which filtered air is diffused. Odors have disappeared. There is great freedom from dust. Out-of-door conditions of air purity exist in the building, together with a temperature of comfort.

"Subsequent examinations revealed a scientific basis for the improved conditions. The humidity was found to be practically that of the out-of-door air. The dust was practically eliminated, except where mud was brought into the room by the children's feet. The odors entirely disappeared, and the lighting of the room was not interfered with, the screens giving a diffused light that was comfortable to the eyes.

"The conclusion is inevitable that in this experiment the resulting conditions were not only those of comfort, but those that are at the foundation of health. After all, as stated by Hough, the final test is the experience of the occupants of the room. And then follows a series of reports by teachers, all extolling the plan of ventilation detailed above."—*The Healthy Home*.

A Marquette boy told the teacher that his sister had the measles. The teacher sent him home and told him to stay until his sister got well. After he had skipped joyfully away another boy held up his hand and said: "Teacher, Jimmy Doland's sister what has the measles lives in Omaha."—*Jewell Republican*.

Personal Liberty Chatter—Have You Heard It?

"You cannot stop it." "Let them get it." "Business must not be interfered with." "I am not afraid of it hurting me." "What, stop at home with only a cold? Well, I guess not; I never did and I never will."

Whisky led its liberty lovers a merry chase, ending in poverty, sickness and death, while license in disease has the same ending. The innocent wife, children, neighbor, friends and creditors are the greatest sufferers from both cases.

Both, between snuffles, relate their troubles, which they blame on another's prejudiced acts, and end by asking your sympathy. Booze is always misunderstood, while snuffles expects you to agree that "his is the worst cold you ever saw." Seldom has either enough Scotch thrift to keep the cause of his troubles to himself. Neither wishes to go home and go to bed, where he belongs. Both are awful bores. Let us make "only a cold" an outlaw with booze.

Pneumonia kills more of our people than any other disease. It is as contagious as diphtheria, being spread in the same way—from the mouth and nose of the patient and other members of the patient's family.

Unless masks are worn, attendants of pneumonia and diphtheria patients become carriers. The germs of these diseases find lodgement in the nose and throat, where they reproduce themselves, often causing "only a cold" or a slight sore throat. The patient is the lesser danger to the public.

More death has been spread from the unrecognized cases of "only a cold" influenza than from all other sources.

A known spy fails to get far; so in disease it is the apparently innocent "cold" that places the bombs of disease. When will public opinion oust personal license?—*T. H. Jamieson, County Health Officer.*

What Constitutes a State?

What constitutes a state?
 Not a high-raised battlement or labored mound,
 Thick wall or moated gate;
 Not cities proud, with spires and turrets crowned;
 Not bays and broad-armed ports,
 Where, laughing at the storm, rich navies ride;
 Nor starred and spangled courts,
 Where low-born baseness wafts perfume to pride;
 No—men, high-minded men,
 With powers as far above dull brutes endued,
 In forest, brake or den,
 As beasts excel cold rocks and brambles rude;
 Men, who their duties know,
 But know their rights, and, knowing, dare maintain;
 Prevent the long-aimed blow,
 And crush the tyrant, while they rend the chain;
 These constitute a state;
 And sovereign law, that with collected will
 O'er thrones elate,
 Sits empress, crowning good, repressing ill.

—*Prof. W. H. Jones.*

FORGET IT!

If you see a good fellow ahead of the crowd,
A leader of men, marching fearless and proud,
And you know of a tale whose mere telling aloud
Would cause his proud head in anguish to be bowed,
It's a pretty good plan to—forget it.

If you know of a skeleton hidden away
In a closet, and guarded and kept from the day,
In the dark, and whose showing, whose sudden display,
Would cause grief and sorrow and lifelong dismay,
It's a pretty good plan to—forget it.

If you know of a spot in the life of a friend
(We all have such spots concealed, world without end),
Whose touching his heartstrings would play on and rend,
Till the shame of its showing no grieving could mend,
It's a pretty good plan to—forget it.

If you know of a thing, just the least little sin,
Whose telling would cork up a laugh or a grin
Of a man you don't like, for the Lord's sake, keep it in.
Don't, don't be a knocker; right here stick a pin—
It's a pretty good plan to—forget it.

BULLETIN

OF THE

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S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

January, 1919.

KEEP YOUR- FEET DRY!

... ..



MORBIDITY REPORT FOR DECEMBER, 1918.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.....	Diphtheria...	Scarlet fever..	Measles (morbilli)...	Ger. measles (rubella)....	Whooping cough.....	Chickenpox..	Mumps.....	Pneumonia (acute lobar).	Meningitis (epidemic)...	Polio-myelitis (epidemic)...	Influenza.....	Other diseases.
The State.....	27	67	90	79	90	4	31	60	38	548	16-a	2	46,354	185
Allen, except.....	0	0	0	0	0	0	0	0	0	0	0	0	381	0
Iola.....	0	10	0	0	0	0	0	0	0	5	0	0	75	1
Anderson.....	0	0	1	0	0	0	0	0	0	1	0	0	131	0
Atchison, except.....	0	0	1	0	0	0	0	9	2	0	0	0	261	0
Atchison city.....	0	4	2	0	0	0	0	0	0	2	0	0	286	0
Barber.....	0	0	0	0	0	0	0	0	0	0	0	0	232	0
Barton, except.....	0	0	2	0	0	0	0	0	0	4	0	0	187	0
Great Bend.....	0	0	0	1	0	0	0	0	0	3	1	0	84	0
Bourbon, except.....	1	0	0	0	0	0	0	1	0	12	0	0	333	1
Fort Scott.....	0	0	0	0	0	0	0	0	0	1	0	0	62	5
Brown.....	0	0	0	2	0	0	0	0	0	4	0	0	772	2
Butler, except.....	5	8	0	3	0	0	0	1	0	30	2	0	990	0
Augusta.....	1	0	0	0	0	0	1	0	0	13	0	0	116	4
El Dorado.....	3	0	4	0	0	0	0	0	2	32	0	0	337	0
Chase.....	0	0	0	1	1	0	0	0	0	0	0	0	213	0
Chautauqua.....	0	0	0	0	0	0	0	0	0	0	0	1	77	0
Cherokee, except.....	1	0	2	2	2	0	0	0	0	16	0	0	867	3
Galena.....	0	0	0	0	0	0	0	0	0	0	0	0	308	0
Cheyenne.....	0	0	0	0	0	0	0	0	0	0	0	0	112	0
Clark.....	0	0	0	0	0	0	0	0	0	1	0	0	137	0
Clay.....	0	1	0	0	20	0	1	0	0	3	1	0	760	1
Cloud, except.....	0	0	0	0	0	0	0	0	0	6	0	0	458	1
Concordia.....	0	0	0	0	0	0	0	0	0	4	0	0	301	1
Coffey.....	1	0	0	0	0	0	0	0	0	0	0	0	108	2
Comanche.....	0	0	1	0	0	0	0	0	0	0	0	0	36	0
Cowley, except.....	0	0	0	0	0	0	5	0	0	10	2	0	763	0
Arkansas City.....	0	0	0	0	0	0	0	1	0	5	0	0	349	5
Winfield.....	0	0	0	0	0	0	7	3	0	12	0	0	898	3
Crawford, except.....	0	2	5	0	1	0	0	1	0	27	0	0	909	2
Pittsburg.....	0	0	0	0	0	0	0	1	0	6	0	0	876	2
Decatur.....	0	0	0	0	0	0	0	0	0	1	0	0	146	0
Dickinson.....	0	0	0	4	0	0	0	1	0	0	0	0	376	0
Doniphan.....	0	0	0	3	0	0	0	0	0	25	0	0	820	0
Douglas, except.....	0	0	0	4	0	0	0	0	0	2	0	0	513	0
Lawrence.....	0	0	0	3	2	0	0	1	0	3	0	0	711	3
Edwards.....	2	0	0	0	0	0	0	0	0	0	0	0	164	0
Elk.....	0	0	0	0	0	0	0	0	0	6	0	0	82	0
Ellis.....	0	0	0	0	0	0	0	0	0	0	0	0	48	0
Ellsworth.....	0	1	0	0	0	0	0	0	0	5	0	0	287	0
Finney.....	0	0	0	0	0	0	0	0	0	7	0	0	189	1
Ford, except.....	0	0	0	0	0	0	0	4	0	5	0	0	423	0
Dodge City.....	0	0	0	1	0	0	5	1	2	4	0	0	331	0
Franklin, except.....	0	0	0	1	0	0	0	0	0	0	0	0	537	1
Ottawa.....	0	0	1	1	0	0	0	0	0	1	0	0	412	0
Geary, except.....	0	0	3	2	1	0	0	0	0	1	0	0	91	0
Junction City.....	0	0	0	2	13	0	0	0	0	7	5(a)	0	166	11
Gove.....	0	0	0	0	0	0	0	0	0	0	0	0	46	0
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	134	0
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Gray.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	0	7	0	0	0	0	1	0	17	1	0	510	1
Hamilton.....	0	0	0	0	0	0	1	1	0	0	0	0	38	0
Harper.....	0	0	0	0	3	0	1	0	1	1	0	0	550	0
Harvey, except.....	0	4	1	0	0	0	0	0	0	0	0	0	61	0
Newton.....	0	0	1	4	0	0	0	1	0	0	0	0	159	1
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	60	0
Hodgeman.....	0	0	0	0	1	0	0	0	0	1	0	0	83	0
Jackson.....	0	0	0	0	0	0	0	0	0	0	1	0	483	0
Jefferson.....	0	0	4	1	0	0	0	0	0	2	0	0	763	0
Jewell.....	0	10	0	0	0	0	0	0	1	1	0	0	370	2
Johnson.....	0	0	0	2	0	0	0	0	0	5	0	0	463	0
Kearny.....	0	0	0	0	0	0	0	0	0	1	0	0	110	0
Kingman.....	0	6	0	0	0	0	0	0	0	2	0	0	437	0
Kiowa.....	0	0	0	0	0	0	0	0	0	1	0	0	338	1
Labette, except.....	0	0	0	1	0	0	0	0	0	3	0	0	202	10
Parsons.....	0	3	0	0	0	0	0	0	1	2	0	0	279	3
Lane.....	0	0	0	0	0	0	0	0	0	0	0	0	81	0
Leavenworth, except.....	0	0	0	1	0	0	0	0	1	8	0	0	286	0
Leavenworth.....	0	0	4	0	0	0	0	1	0	2	0	0	123	46

MORBIDITY REPORT FOR DECEMBER, 1918—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.....	Diphtheria...	Scarlet fever..	Measles (morbilli)...	Ger. measles (rubella)....	Whooping cough.....	Chickenpox..	Mumps.....	Pneumonia (acute lobar).	Meningitis (epidemic)...	Polio-myelitis (epidemic)...	Influenza.....	Other diseases.
Lincoln.....	0	0	0	2	0	0	0	0	0	2	0	0	366	1
Linn.....	2	0	3	0	1	0	0	0	0	5	0	0	845	0
Logan.....	1	1	0	0	0	0	0	0	0	0	0	0	48	0
Lyon, except Emporia.....	0	0	0	1	0	0	0	0	0	0	0	0	127	0
Marion.....	0	0	0	1	1	0	0	2	1	13	1	0	1,035	0
Marshall.....	1	0	0	0	0	0	0	0	3	11	0	0	615	1
McPherson.....	0	0	0	1	0	0	0	0	0	1	0	0	723	0
Meade.....	0	0	0	0	0	0	0	1	0	0	0	0	83	0
Miami.....	0	0	3	2	0	0	0	0	0	18	0	0	342	0
Mitchell.....	0	0	0	0	0	0	0	0	1	3	0	0	475	0
Montgomery, except Coffeyville.....	0	0	1	0	0	0	0	0	0	14	0	0	670	0
Independence.....	2	0	2	0	0	0	0	0	0	2	0	0	434	0
Morris.....	0	0	0	0	0	0	0	0	0	18	0	0	685	1
Morton.....	0	0	0	0	0	0	0	0	0	1	0	0	93	0
Nemaha.....	0	0	0	0	0	0	0	0	1	0	1	0	90	0
Neosho, except Chanute.....	0	0	0	0	1	0	0	0	0	3	0	0	291	0
Ness.....	0	0	0	0	0	0	0	0	0	1	0	0	240	0
Norton.....	0	0	0	0	0	0	0	0	0	0	0	0	102	1
Osage.....	0	0	1	0	0	0	0	0	0	18	0	0	239	0
Osborne.....	0	0	0	0	0	0	0	0	0	2	0	0	380	0
Ottawa.....	0	0	0	0	0	0	0	1	0	6	0	0	420	0
Pawnee.....	0	0	0	0	0	0	0	0	0	0	0	0	245	0
Phillips.....	0	0	0	0	0	0	0	0	0	0	0	0	430	0
Pottawatomie.....	0	0	6	1	8	0	1	2	0	8	0	0	474	0
Pratt.....	0	1	0	0	2	0	0	1	0	1	0	1	522	2
Rawlins.....	0	0	0	0	0	0	0	0	0	0	0	0	642	1
Reno, except Hutchinson.....	0	0	0	1	0	0	0	0	0	0	0	0	1,474	0
Republic.....	0	0	6	0	3	0	0	1	0	1	0	0	42	0
Rice.....	0	0	0	3	5	0	0	0	0	3	0	0	408	1
Riley, except Manhattan.....	0	0	0	0	0	0	0	0	0	2	0	0	781	0
Rooks.....	0	0	0	0	0	0	0	0	2	2	0	0	455	0
Rush.....	0	0	1	0	0	0	0	0	0	0	0	0	818	0
Russell.....	0	0	0	0	13	0	0	0	0	14	0	0	290	0
Saline, except Salina.....	0	0	0	0	6	0	0	7	5	29	0	0	421	6
Scott.....	0	0	0	0	0	0	0	0	0	0	0	0	60	0
Sedgwick, except Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	206	0
Seward.....	0	4	2	1	2	0	0	3	1	7	0	0	280	0
Shawnee, except Topeka.....	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Sheridan.....	0	0	0	0	1	0	0	0	0	1	0	0	213	0
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	33	0
Smith.....	0	0	0	0	0	0	1	0	0	0	0	0	39	1
Stafford.....	0	0	0	3	0	0	0	0	0	0	0	0	1,846	21
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	89	0
Stevens.....	0	0	0	0	0	0	0	0	0	1	0	0	341	2
Sumner, except Wellington.....	0	1	0	2	0	2	7	0	0	38	0	0	1,359	2
Thomas.....	0	0	1	2	0	0	0	0	0	17	0	0	33	0
Trego.....	0	0	0	0	0	0	0	0	0	4	0	0	94	0
Wabaunsee.....	2	0	0	0	0	0	0	0	0	0	0	0	446	0
Wallace.....	0	0	0	0	0	0	0	0	0	0	0	0	228	0
Washington.....	0	0	0	0	0	0	0	0	0	1	0	0	8	0
Wichita.....	0	0	0	0	0	0	0	0	0	1	0	0	100	0
Wilson.....	0	0	0	1	0	0	0	1	1	0	0	0	1,393	0
Woodson.....	0	0	2	0	0	0	0	0	0	0	0	0	626	1
Wyandotte, except Kansas City.....	0	0	2	0	0	0	0	0	0	0	0	0	248	0
Rosedale.....	2	5	11	4	1	2	1	6	3	63	0	0	177	0
	0	0	0	0	0	0	0	0	0	0	0	0	329	0
													97	0
													68	0
													19	0
													228	1
													123	0
													129	0
													1,671	22
													84	8

(a) 4 carriers.

* No report. Other communicable diseases: Cancer, 8; chancre, 1; erysipelas, 6; gonococcus infection, 127; malaria, 1; meningitis (influenzal or pneumococcal), 6; ophthalmia neonatorum, 1; pellagra, 1; septic sore throat, 6; syphilis, 28; trachoma, 7.

Kansas Medical and Nurses' Reserve.

The Kansas State Board of Health issues a call for volunteers to enroll in the medical and nurses' reserve of the state as the first step in preparations necessary in anticipation of another epidemic of influenza which experts have warned us is likely to sweep the country sometime during the year 1919.

During the past epidemic many sections of the state were in great distress because of insufficient medical and nursing service—in some instances without any such service. It is possible that a good many lives were sacrificed in Kansas by reason of the lack of such assistance. It is, therefore, designed that a voluntary force of physicians and trained nurses and nurses' aids be ready so that when necessity arises, a sufficient number may be dispatched to a community on short notice to meet the community's needs.

The legislature will be asked to make an emergency appropriation for this purpose, services to be rendered and compensation to be paid upon the same basis as that provided by the United States Public Health Service during the recent epidemic.

The State Board of Health would like to receive the names of qualified registered physicians and nurses and nurses' aids who will volunteer for such service. Communications should be addressed to the Secretary of the Board, Dr. S. J. Crumbine, Topeka, Kansas.

Drug Analysis LVII.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist;
G. N. WATSON, Analyst.

In submitting the fifty-seventh report of the drug laboratory we have a tabulation of 231 analyses. The standards for such official preparations as spirits of camphor, tincture of iodine, essence of peppermint and other preparations submitted are so well known, it seems, that the dispensing of substandard preparations under these titles cannot be due to ignorance nor willful adulteration, but rather to negligence on the part of the dispenser, who does not keep careful watch of his stock. Unfortunately, however, the law makes no discrimination between negligence and willful adulteration.

It is gratifying to note that an unusually large percentage of the preparations examined have been passed as coming up to standard, due, it may be assumed, to the administration of the food and drugs law, in which the definite standards for remedial agents are insisted upon.

Among the unofficial preparations the usual comment obtains where we find claims made that are unwarranted. For example, in the tooth preparation known as Pepsodent, which is declared by the manufacturer to contain pepsin, no proteolytic fermentive action is found. One would hardly expect to find pepsin, in active condition, in such a preparation. The antiseptics present would be antagonistic and render the article, from a peptic standpoint, inactive, and a claim for any peptic activity would be theoretically unwarranted.

Insp. No. 22679—*Tincture of Aconite*. This sample of aconite was purchased by M. O. Gragg, who found the article to have a different effect on animals from that previously purchased as tincture of aconite. On examination this liquid was found to be tincture of aconite leaves, which was very much more dilute and containing less of aconitine than tincture of aconite root, U. S. P. IX. The quantity in the first sample sent was so small that it was impossible to extract from it any of the alkaloid or to identify it positively, other than it was not the *official* tincture. A second sample, alleged to be the same, gave alkaloidal reaction, but was evidently not the official tinctura aconite of the U. S. P.

Linseed Oil has been of recent date marketed of standard grades as a rule. Samples suspected of substandard quality are herewith reported. While some of the oils are on the border line of inferiority, they cannot be classified as far enough below standard to be designated as substandard. Some linseed oils more recently coming to the laboratory go perceptibly below the standard. Inferior seed (seed not well garbled and freed from mustard and foreign seed) will yield these inferior oils, perhaps, and, owing to the high price of oil (and seed), special care ought to be exercised in the preparation of the crude material before the oil is extracted. Less obscure sources of inferiority are well known.

Mentholic Ether Compound. A report on this preparation was called for, asking for its phenol coefficient, which was found to be .45.

SPECIAL ANALYSES.

Practically all of these special analyses were emergency cases; or cases sent to the laboratory, either direct from individuals, through the Board of Health, or from state officials. The paints were sent for analytical report on same by Board of Administration. The reports on these analyses were sent to the individuals under direction of the Board of Health, or to them by the proper official of that body.

RESEARCH.

Communications come to this office, even from other states, asking for our findings in specific analyses of various products, such as those relating to food accessories—coffee, coffee substitutes, species and drug preparations—showing the broadening usefulness of the food and drugs state work. As opportunity and time is afforded, the drug laboratory is engaged in such research as will bear upon standards. There are many drugs and preparations for which there are no reliable standards published. At the time of the ninth revision of the United States Pharmacopœia the writer endeavored to have introduced a standard for gelsemium, but the committee of revision did not regard the investigations thus far sufficiently complete for the preparations of this drug to venture the adoption of a standard. Our laboratory investigation at present suggests the standard for fluid extract of gelsemium, which will be submitted at the next meeting of the standards committee.

SACCHARIN.

Requests have come in to the laboratory for advice with regard to the use of saccharin in the case of making syrups. A formula for this saccharin-sugar syrup has recently been published in current pharmaceutical literature.

The author of this formula makes the following statement: The solution, when added to 10.9 gallons of concentrated syrup, will make the same volume of syrup as that obtained by the percolation of 100 pounds of sugar. Its specific gravity will be less than the former, but its density will be nevertheless sufficient to assure its freedom from fermentation, and consequently its quality as a preservative of many of the delicate fruit flavors. A syrup of this composition will represent a 1:4000 solution. The above combination will represent the sweetening power of 100 pounds of sugar, when saccharin of the highest purity is employed.

Replies to inquiries coming to this office about saccharin-sugar syrups have been to the effect that thus far the State Board of Health has not recognized the substitution of sugar in any proportion whatsoever by saccharin. However satisfactorily the gustatory nerves may be satisfied by the sweetening properties of saccharin as used in the above syrup preparation, and however valuable such substitution may be for the treatment of diabetes, sugar syrups' value lies not only in its palatability but in its food content; in proportion as the gustatory nerves are satisfied by the above hydrocarbon derivative, in that proportion is the body cheated out of its nutritive substance. Therefore it may be argued that any modicum of substitution of saccharin for sugar, thereby decreasing nutritive values, ought to be considered in the light of the food and drugs law as an *added substance*.

TINCTURE OF IODIN.

Laboratory No.	Inspection No.	NAME.	City.	Percent Iodin.	Percent potassium iodide.	Remarks.
7306	50086	Cooke Drug Co...	Sterling...	7.03	5.36	Passed.
7318	81020	J. R. Esen.....	Neodesha...	6.52	4.79	Passed.
7319	81021	Ross Porter.....	Neodesha...	7.28	5.42	Passed.
7320	81022	Butin Bros.....	Fredonia...	6.74	5.13	Passed.
7321	81023	W. T. Sprague....	Fredonia...	7.20	5.82	Passed.
7324	81030	C. B. Highbargain,	Eureka.....	6.79	4.34	Passed.
7327	50012	M. W. Friedenburg,	Winfield....	7.23	5.04	Passed.
7327½	.....	T. V. Campbell...	Topeka.....	3.82	.....	Adulterated.
7328	50013	T. V. Campbell...	Topeka.....	3.82	2.70	Added water; adulterated.
7331	50016	T. V. Campbell...	Topeka.....	3.82	2.71	Added water; adulterated.
7335	50043	T. V. Campbell...	Topeka.....	5.62	3.76	Added water; adulterated.
7347	50070	F. W. Hoffmeister,	Kanopolis...	6.87	5.09	Passed.
7353	50080	J. L. Sales.....	Lyons.....	7.90	4.80	Passed.
7372	50100	H. B. Leach & Son.	Alton.....	6.87	5.21	Passed.

Tincture of Iodin should contain not less than 6.5 gm. nor more than 7.5 gm. of Iodin and not less than 4.5 gm. nor more than 5.5 gm. of potassium iodide per 100 mls.

SPIRIT OF CAMPHOR.

Lab. No.	Insp. No.	NAME.	City.	Percent camphor.	Remarks.
7325	81031	C. B. Highbargain.....	Eureka.....	3.89	Adulterated.
7327	50014	T. V. Campbell.....	Topeka.....	11.60	Passed.
7346	50069	F. W. Hoffmeister.....	Kanopolis.....		Turbid preparation.
7349½	50073	W. E. Fowler.....	Brookville.....	12.84	Above standard.
7354	50081	J. L. Sales.....	Lyons.....		Broken in transit.
7355	50085	Cooke Drug Co.....	Sterling.....	9.80	Passed.
7375	50107	Ebnother & Co.....	Downs.....	9.50	Passed.
7379	50111	Kent-Long Drug Co....	Beloit.....	9.82	Passed.
7381	50118	Corner Pharmacy.....	Beloit.....	10.47	Passed.
7385	50117	Lee-Clark Drug Co....	Beloit.....	7.95	2 percent added water; adulterated.

Spirit of camphor should contain not less than 9.5 gm. nor more than 10.5 gm. camphor per 100 mls.

GLYCERIN.

Lab. No.	Insp. No.	NAME.	Town.	Specific gravity.	Remarks.
7330	50015	T. V. Campbell.....	Topeka.....	1.248	No glucose, acrolein, ammonia, sulphate.
7359	50095	C. D. Vermillion.....	Tescott.....	1.255	No glucose, acrolein, ammonia, sulphate.
7360	50096	Stoy E. Ware.....	Sylvan Grove...	1.253	No glucose, acrolein, ammonia, sulphate.

ESSENCE OF PEPPERMINT.

Lab. No.	Insp. No.	NAME.	Town.	Mils. oil per 100 mls.	Remarks.
7351	50078	Seitz Drug Co.....	Ellsworth.....	9.62	Passed.
7350	50074	W. E. Fowler.....	Brookville.....	7.98	No chlorophyll color. Substandard.

Essence of peppermint should contain 10 mls. of oil of peppermint and the chlorophyll from 1 gram of bruised peppermint per 100 mls.

GLYCERIN.

Lab. No.	Insp. No.	NAME.	City.	Specific gravity at 25° C.	Glucose.
7369	50098	Nyal Drug Store.....	Norton.....	1.255	None.
7374	50106	Ebnother & Co.....	Downs.....	1.250	None.
7378a	50110a	Kent-Long Drug Co.....	Beloit.....	1.255	None.
7382	50114	Corner Pharmacy.....	Beloit.....	1.249	None.

Glycerin should have specific gravity not below 1.249 at 25° C., and should otherwise conform to the tests of the U. S. P.

ALCOHOL.

Lab. No.	Insp. No.	NAME.	City.	Percent alcohol by volume.	Remarks.
7370	50100	H. B. Leach & Son	Alton	94.66	Substandard.
7373½	50108	G. C. Hamilton	Stockton	94.04	Substandard.
7377	51509	Ebnother & Co.	Downs	92.75	Substandard.
7380	50112	Kent-Long Drug Co.	Beloit	94.90	Passed.
7383	50114	Corner Pharmacy	Beloit	94.04	Substandard.
7384	50115	Lee Clark Drug Co.	Beloit	93.00	Substandard.

Alcohol should contain 94.9 percent absolute alcohol by volume, and otherwise conform to the tests of the U. S. P.

FLAX SEED.

Lab. No.	Insp. No.	NAME.	City.	Remarks.
7394	81148	Fredonia Linseed Oil Works Co.	Fredonia...	Unscreened seed. Contained mustardseed, .14 percent; chaff and other weed seed, 4.88 percent.
7395	81148	Fredonia Linseed Oil Works Co.	Fredonia...	Screened seed. Contained mustard seed, .055 percent; chaff and other weed seed, 2.12 percent; Saponification value of unclarified oil, expressed from seed, 191.89; iodine value (Hanus), 169.2.

LINSEED OIL.

Lab. No.	Insp. No.	NAME.	City.	Specific gravity.	Sapon. value.	Iodin. value (Hanus).	Remarks.
7388	81142	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.936	189.90	168.2	Unfiltered as from crushers.
7389	81143	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.936	191.80	173.5	Filtered oil.
7390	81144	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.936	183.65	160.7	"Boiled oil." Low sapon. value.
7391	81145	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.933	190.07	165.67	Raw oil. Low iodine value.
7392	81146	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.933	183.61	160.07	Boiled oil. Low saponification value.
7393	81147	Fredonia Linseed Oil Works Co. ...	Fredonia...	0.933	182.35	160.07	"Boiled oil." Low sapon. value.
7396	50118	J. B. Remington...	Osawatomie,	0.936	159.45	148.08	Jobber, Fredonia Linseed Oil Works Adulterated.
7397	50119	G. H. Wagner.....	Osawatomie,	0.935	190.07	175.12	Jobber, Kansas City Lead & Oil Works. Passed.
7365	22666	Miller & Gillespie..	Topeka....	0.936	152.00	.....	Jobber, Fredonia Linseed Oil Works Contained 16 percent unsaponifiable matter. Adulterated.
7368	22669	Miller & Gillespie..	Topeka....	0.935	153.00	142.30	Boiled oil. Jobber, Fredonia Linseed Oil Works. Adulterated.
7367	22668	Miller & Gillespie..	Topeka....	0.935	154.30	141.68	Boiled oil. Jobber, Fredonia Linseed Oil Works. Adulterated.

Raw linseed oil should have specific gravity 0.925 to 0.935 at 25° C. saponification value, not less than 187 nor more than 195; iodine value, not less than 170; and should otherwise conform to the latest requirement of the U. S. P.

Boiled linseed oil should have a specific gravity at 60° F. of not less than 0.935; saponification value, not less than 186; iodine number (Huebl's method), not less than 160; unsaponifiable matter, not more than 2.5 percent; and should otherwise conform to the Kansas linseed oil law of 1911.

MISCELLANEOUS OFFICIAL PREPARATIONS.

Lab. No. 7317, Insp. No. 81019. Tr. arnica. Al Mills, Neodesha. Alcohol, 39.75 percent. Extractive, 3.92 gm. per 100 mils. Passed.

Lab. No. 7322, Insp. No.——. Acetanilid tablets, 3 gr. Contained 1.72 gr. Misbranded.

Lab. No. 7326, Insp. No. 81032. Bay rum. C. B. Highbargain, Eureka. Declared to contain 58 percent alcohol. Contained 53.82 percent alcohol. Deficient in oil.

Lab. No. 7333, Insp. No. 50041. Sweet spirit of nitre. T. V. Campbell Drug Co., Topeka. Contained a trace of ethyl nitrate. Adulterated.

Lab. No. 7334, Insp. No. 50042. Syrup of hydriodic acid. T. V. Campbell Drug Co., Topeka. Contained 1.45 gm. HI per 100 mils. Passed.

Lab. No. 7336, Insp. No. 50044. Lanolin. T. V. Campbell Drug Co., Topeka. Neutral to litmus. Water, 22 percent; ash, .13 percent. Passed.

Lab. No. 7341, Insp. No. 22656. Linseed oil. Saponification value, 121.19. Dried within 7 hours, forming tacky film. Contained mineral oil and rosin oil. Adulterated and misbranded.

Lab. No. 7345, Insp. No. 22661. Elixir beef, iron and wine. Alcohol, 10.03 percent; ash, .554 gm. per 100 mils.; solids, 10.73 gm. per 100 mils. Showed evidence of usual amount of iron. Sent in to determine if preparation was an intoxicant.

Lab. No. 7348, Insp. No. 50071. Acid acetyl salicylic. F. W. Hoffmeister, Kanopolis. No foreign substance detected. Passed.

Lab. No. 7349, Insp. No. 50072. Oxide zinc ointment. F. W. Hoffmeister, Kanopolis. Contained benzoinated lard. Zinc oxide, 21.3 percent. Passed.

Lab. No. 7352, Insp. No. 50079. Po. borax. Seitz Drug Co., Ellsworth. Net weight declared, 4 oz. Contained equivalent of 4.27 oz. crystallized borax.

Lab. No. 7357, Insp. No. 50087. Acetphenetidin tablets. Walter Sledd & Co., Sterling. Contained 4.62 grains acetphenetidin.

Lab. No. 7363, Insp. No. S 2000. Elixir calisaya, iron and strychnine. Total alkaloids per oz., .060 gm. Metallic iron per oz., .0224. Strychnine present. Quinine present. Sample insufficient for separation of cinchona alkaloids.

MISCELLANEOUS UNOFFICIAL PREPARATIONS.

Lab. No. 7335½, Insp. No. 22619. Rat Corn. Contained barium carbonate and aluminum silicate.

Lab. No. 7337, Insp. No. 22625. Mayer's Wonderful Remedy. Composed of bottle of oil (olive or peanut), and two powders (sodium phosphate and magnesium sulphate).

Lab. No. 7340, Insp. No. 22647. Pepsodent. Contained calcium phosphate. Showed no proteolytic action on egg albumin. Declared by the manufacturer to contain pepsin.

Lab. No. 7358, Insp. No. 50088. Aspirin. Walter Sledd and Co., Sterling. Contained 5.1 grains acetyl salicylic acid. Passed.

Lab. No. 7362, Insp. No. 81140. Suparene. Sample insufficient for analysis. Tested physiologically, compared favorable with the class of preparations called catarrhal jellies.

Lab. No. 7364, Insp. No.——. Vick's Vapo Rub. Contained 18.3 percent volatile matter, which has the characteristic penetrating properties of camphor and other pungent, cooling camphoraceous bodies, such as eucalyptol, thymol, and like volatile oil oxygen derivatives.

Lab. No. 7365, Insp. No. 22666. Boiled Linseed Oil. Specific gravity, .936; saponification value, 152. Does not form hard films on glass plate. Adulterated.

Lab. No. 7387, Insp. No. 22679. Tincture aconite leaves. Sent in for identification. Contained 69.3 percent alcohol. Contained aconitine and showed other indications of being tincture of aconite leaves.

ANALYSES OF BOILED LINSEED OIL.

Lab. No. 7368, Insp. No. 22669; specific gravity at 60° F., .9350; saponification value, 153.0; iodine value, 142.3; acid value, 8.97; the film left after flowing the oil over glass and allowing to stand for twenty hours at temperature of about 70° showed very little binding power, being easily rubbed off the plate with the finger.

Lab. No. 7367, Insp. No. 22668; specific gravity at 60° F., .9350; saponification value, 154.3; iodine value, 141.68; acid value, 9.31. The film left after flowing the oil over glass and allowing to stand for twenty hours at temperature of about 70° showed very little binding power.

SPECIAL ANALYSES.

Identification of white powder; three samples of candy for poison; analysis of green liquid; examination of grass for arsenic; identification of tablets; analysis of epilepsy remedy; analysis of proprietary remedy containing added poison; alcohol determination on cider; analysis of tablet triturate; analysis of liquid; analysis of "opium habit cure"; identification and analysis of remedy alleged to have proven fatal in case of whooping cough; identification of insect powder; determination of alcohol content of the beverages "Hek" and "Malto"; analysis of epilepsy remedy; examination of sample of tea for poisonous substance; analysis of crude petroleum; analysis of "Beto"; a diabetes remedy; alcohol content of cider; analysis and standardization of tincture of belladonna for the university infirmary; analysis of "Radol"; analysis of goiter remedy; identification and qualitative determination of contents of capsules; examination of beeswax for department; analysis of liquid for alcohol content; analysis of morphine sulphate tablets; alcohol content of two samples of liquor; analysis of chicken tonic; analysis of hair tonic; examination of tincture of green soap; analysis of "healing powder"; analysis of 38 gloss paints; analysis of 23 flat paints; analysis of 12 white enamels; analysis of 2 samples of white lead; analysis of 35 samples of varnish; analysis of 5 samples of white shellac; analysis of 4 samples of orange shellac; analysis of mentholic ether compound for phenol coefficient—making in all 156 samples in the group of special analyses.

Three Months' Toll of Death From Influenza.

After three tense, anxious and sobbing months, during which the doctors, health officers and nurses were battling with the most widespread and malignant epidemic disease that has ever invaded our country, we have finally had time to count the dead.

The number of wounded and permanently crippled will never be known, nor will the sum total of human suffering, broken homes and hearts and agonizing misery ever be told except by the Recording Angel.

One hardly dare speak of the economic loss to the state by the interruption and stagnation of business, nor estimate what it has meant to the mental and moral agencies of the state by the closure of school and church; but whatever that has been, the staggering loss in human life must challenge our thoughtful consideration in preparation to meet future contingencies, leaving nothing to chance in preparation for a recurrence of influenza in the near future.

Influenza and pneumonia deaths occurred during the months of October, November and December, 1918 (exclusive of the deaths occurring at Camp Funston and Fort Leavenworth), as follows:

	October.	November.	December.	Total.
Influenza	1,188	1,026	1,629	3,843
Lobar pneumonia	549	336	446	1,331
Broncho-pneumonia	80	78	115	273
	<hr/> 1,817	<hr/> 1,440	<hr/> 2,190	<hr/> 5,447

Influenza and pneumonia deaths occurring at Camp Funston and Fort Leavenworth during the months of October, November and December 1918, were as follows:

	October.	November.	December.	Total.
Influenza	256	2	16	274
Lobar pneumonia	753	34	32	819
Broncho-pneumonia	0	16	14	30
	<hr/> 1,009	<hr/> 52	<hr/> 62	<hr/> 1,123

The total influenza and pneumonia deaths occurring during the months of October, November and December, 1918 (including the deaths occurring at Camp Funston and Fort Leavenworth), were as follows:

	October.	November.	December.	Total.
Influenza	1,444	1,028	1,645	4,117
Lobar pneumonia	1,302	370	478	2,150
Broncho-pneumonia	80	94	129	303
	<hr/> 2,826	<hr/> 1,492	<hr/> 2,252	<hr/> 6,570

The Fitzsimons Memorial Hospital.

At a recent meeting of the officers, councillors and committee on legislation of the Kansas State Medical Society, resolutions were adopted urging the legislature to approve the recommendations of the State Board of Administration, which, if approved, would provide the ways and means for the proper development of the School of Medicine of the University of Kansas.

Through these resolutions the organized medical profession is giving voice to a demand for better facilities to treat the sick poor of the state and train our young men and women in the more useful of the professions, the modern physician and the trained nurse, which demand has been too long delayed and the merits of which have been too tardy of recognition.

The resolutions follow:

Recommendations of the President, Councillors and Committee of the Kansas State Medical Society, to the Governor, the Senate and the House of Representatives of the State of Kansas:

We, the undersigned committee of the Kansas State Medical Society, respectfully present the following recommendations to the governor, the senate and the house of representatives of Kansas:

1. Upon no other profession or class of men have the burdens and sacrifices necessitated by this war fallen so heavily as upon the medical profession. The first request of the allies after the United States entered the war was for one thousand physicians. The first American army officer killed was Lieut. William Thomas Fitzsimons, M. E. R. C., a graduate of the School of Medicine of the University of Kansas. We

therefore believe that in recognition of these facts the state should give consideration to the wishes and needs of the medical profession, which ultimately are for the best interests and health of the people: *We therefore recommend*, that a hospital be erected as a memorial to the first American army officer killed in France—Lieut. William Thoman Fitzsimons, M. D.

2. *We therefore recommend*, that the state build and support a hospital, or hospitals, to care for crippled and deformed children, acute surgical and medical cases and maternity patients who may require attention. We believe that this work could be done most economically and efficiently in connection with the School of Medicine of the University of Kansas, which has been doing this kind of work and which has the organization and staff to care for it.

3. *We also hold*, that the war and influenza epidemic have emphasized the necessity of the state's maintaining and adequately supporting its hospitals, its School of Medicine, its Training School for Nurses (including public health nurses), and its laboratory for the diagnosis of venereal diseases.

4. *We further state*, that the chairman of this committee has personally visited the hospital and laboratories of the School of Medicine at Rosedale and investigated the situation there; and upon his report, this committee desires to recommend that appropriations be made at this session of the legislature for the following urgently needed purposes:

(a) The purchase of additional ground in Rosedale, so that a complete plant may be erected.

(b) The erection of a heating plant and power house.

(c) The erection of a hospital with suitable accommodations for the kinds of cases mentioned above, including crippled and deformed children, such hospital to be known as The Fitzsimons Memorial Hospital.

Respectfully submitted and signed,

WM. S. LINDSAY, M. D., President,

L. F. BARNEY, M. D., Actg. Chairman,

J. T. AXTELL, M. D., Chairman,

Committee.

State Medicine.

To what extent shall the state be responsible for the health of the people? To what extent shall it provide care for its afflicted population? These are questions to be determined only when our civilization has reached its ultimate of perfection. Even a casual consideration of our state and national history must suggest the inevitable enlargement of the state's interest in the health of its people.

Upon the same basic principle underlying our laws providing for the incarceration of criminals lies the justification for the state's intervention in the prevention of disease, and ultimately in the care of those afflicted. While guaranteeing all the privileges of citizenship in a great republic, the state has reserved an exclusive prerogative, under the broad and expansive term police power, capable of wide interpretation, by which it may ignore the rights and privileges, the interests or the liberty of an individual or individuals, when the life, safety, health or happiness of the people is endangered.

In spite of the fact that our penal laws provide prison sentences as punishment for crime, and in spite of the fact that our criminologists

have endeavored to make reformatories of these prisons, the state's justification for the incarceration of a criminal lies in the fact that the people are thus protected against any injuries which the criminal at liberty might inflict.

In spite of the fact that the institutions for their confinement are called asylums and hospitals rather than prisons, and in spite of the fact that facilities for their treatment and cure are now the predominant consideration in the construction of such institutions, the state's justification for the arrest and confinement of insane persons lies in the fact that thereby the people are protected from the irresponsible acts of the mentally deranged.

It is the same principle that justifies the existence of our reformatories and our homes for the epileptic and the imbecile.

The regulation of the practice of medicine—the enactment of laws establishing a standard of qualifications and providing for the licensing of those who wish to practice medicine—is a just exercise of its exclusive prerogative by the state.

The Board of Health was created as a department of the state, and to it has been delegated the exercise of those police powers pertaining directly to the health of the people. These powers have been enlarged and expanded as wider interpretations were justified by more accurate knowledge of the causes of disease and the means for their prevention. How rapidly this expansive process has developed may be estimated by comparing the early quarantine of smallpox cases, when high board fences and armed guards were required, with the quarantine methods of the recent plague epidemic, when not only the afflicted were confined, but churches, schools, factories, business houses and street cars were closed or restricted in their operation. In this most extensive exercise of its police power the state was justified, in that by such methods was the safety of the greatest number of the people provided for.

Step by step has the state's interest in the health of its people increased and the scope of its intervention widened until the care of every diseased or afflicted person who might be a menace to the safety of the people, and the care of every disease known to be, or believed to be, contagious comes under the supervision of some of its departments.

The last step in the expansive process has been taken with unerring direction, but with slippered foot and stuttering movement, for no one cares to discover the social upheaval that would probably be occasioned by a strict quarantine of venereal diseases. The same basic principle which justifies the state's intervention in the prevention of smallpox, diphtheria and other contagious diseases, more fully justifies its intervention in the prevention of venereal diseases. From the point of view of its disfiguring effects or its mortality, smallpox is insignificant when compared with syphilis and gonorrhea. One may therefore anticipate the state's gradual but finally complete intervention in the control of venereal diseases.

The same factors which have constantly augmented the scope of the state's activities in the field of medicine will continue to operate. It is but a step from the incarceration of the criminal for public safety to the

inauguration of reformatory methods which will restore him to useful citizenship. It is but a step from the confinement of the insane to the curative measures which tend to hasten the safe restoration of their liberty. And it is but a step from the restraint of those afflicted with contagious diseases and the imposition of certain sanitary measures in their care, for the safety of the public, to a complete supervision of their treatment, if by such measures the period of public menace may be reduced to a minimum.

As our knowledge of the etiology of disease becomes more definite and certain, so will the police power of the state be more liberally interpreted and the scope of its application be more widely extended.

With even a casual consideration of the rapid expansion of the state's activities in matters of public health one must anticipate a complete supervision as its ultimate attitude toward the practice of medicine.—*The Journal of the Kansas Medical Society.*

Ghosts!

It was a dark and stormy night—the wind blew and the rain fell. . . . This is the best weather for ghost stories, so we will have it in this story. Of course you understand it's really just the weather we've been having all this month and expect to have next month. Just a regular ordinary weather, but we must consider it on account of the ghost; he's particular. Ordinarily we don't pay any attention to it; John Smith didn't. He went off without his gums—you would call them rubbers, you know—forgot 'em. He didn't care if his feet did get wet. What of it? Well, that awful-looking thing on the front page saw John. "Just my meat—the fellow who doesn't care. I'll get him to-night, and if he doesn't know enough to keep his feet dry he may not know enough to cover his mouth and nose when he sneezes. Maybe I can bag the whole family. I will get John; he'll do the rest."

John's feet got wet waiting for a car. John breathed the air, or something that was in the car—that thick heavy stuff you find in them on a wet day. He didn't like it, but that's what he always found there, so—what of it?

John is now on his way home. Did he use the ventilators in the cars? No! Neither going nor coming. Did anybody else? Well maybe they did, and then again, maybe they didn't. You ought to know; it was the car you came home on last night. The ventilators help things a lot. They exchange air for the "something that is in the car" you know.

That awful-looking thing in the picture followed John. Just before he got home it grabbed him. "You are mine, John Smith, along with a lot of others." Grip had him right—caught him with his rubbers off.

Kerchoo! went John Smith as he kissed his wife. "Oh, John, I do wish you would turn the other way when you sneeze; you splattered me all over that time." Kerchoo! went John Smith all over the little Smiths, turning his head as advised. Just what the ghost thought—he didn't cover up his nose when he sneezed. That is the way the grip got

Mrs. Smith and the rest of the Smiths, and they couldn't understand it. They hadn't been out; they had kept their feet dry.

We take it John didn't know any better—that's his only excuse. You know John is a good scout; he wouldn't poison his wife or hit her with a stick or anything like that, but he sneezed all over her and made her sick. "John, you ought to keep your feet dry. Wear your gums and use your handkerchief when you sneeze."—*Health Hints.*

Rat in the Pickle Barrel.

It is much safer to keep your pickle barrel covered than it is to have a food inspector discover the contents of the barrel in an unsanitary condition.

A rat in a pickle barrel belonging to Fred Koehler, of Paola, cost the Paola merchant \$25 and costs, last week, besides considerable inconvenience and notoriety.

Food inspection as now conducted by the department under the State Board of Health makes it an unprofitable business in Kansas to become slack in the matter of proper protection of food to be sold to the public.

—*Wichita Beacon.*

The taxi swayed and narrowly missed a policeman, then swerved again as it dashed past another taxi, and in so doing just escaped collision with a lamp post.

"Please be careful," pleaded the lady occupant of the cab. "This is the first time I have ever ridden in a taxi."

"Madame, you have my sympathy," gasped the driver. "This is the first time I ever drove one."

Julia rushed to her mother one day in a most excited frame of mind.

"Oh, mother, we've had the best time! We've been playing postman, and we gave every lady in the block a letter."

"But, dear, where did you get the letters?"

"Why, we found them in your trunk in the garret all tied up with blue ribbon!"

"Health is fundamental to all success. The prosperity of our state, in the last analysis, depends upon the bodily vigor of its citizens. This is a self-evident proposition—a premise which every right-thinking man must admit. Without good health as an asset, our people cannot meet the severe physical and mental requirements of the time."—*Gov. H. M. Dorsey.*

Soap and water, sunshine and fresh air, thoroughly applied, are the best disinfectants after disease, and the best preventatives before.

I am as old as the first man and as young as the last born babe—ever changing and unchanged. Where human intercourse is possible there may I be found.

I devastate cities and countries and continents. Athens I robbed of her glory and Rome of her strength. I conquer the armies of conquerors.

I laugh at barriers and bars and bolts. I penetrate both hovel and palace and ravage the frames of the young, the old, the weak and the robust with equal delight. I feel no pity for age, nor sex, nor beauty, nor rank.

I assume many forms, and those whom my first malevolent touch has left weak and defenseless, I seek, ghoul-like, in other guise, again and again to destroy. Cooing infancy, laughing childhood, ambitious youth, happy motherhood, protecting fatherhood and contented age—all these I garner in my remorseless harvest.

Where ignorance, poverty, dissipation or physical stress prevail I take my greatest toll. I am insidious, insatiable, malignant—the unceasing enemy of all mankind.

To the superstitious and the uninformed I am inscrutable, but my clandestine methods of travel and approach cannot withstand the enlightenment of men. Where publicity and education exist, there I do not prosper.

I avoid those with clean lives and careful habits. I languish before the investigation of science, which steals away my virulence.

I can be banished by organized community effort, and when this shall be accomplished my name will lose its potency of mystery and fear, and my ravages cease—for I am

CONTAGION.

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

February, 1919.

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T. B., M. D., N. G.

A weak, sentimental M. D.
Had a patient with early T. B.
He called it a "cold"
And the lie that he told
Catalogued this M. D. as N. G.

Let's clean up!

The season's greatest dangers:

The left-over flies.

The closed windows.

The spring blood purifiers.

The calendar change of clothes.

The accumulated winter rubbish.

The "spring fever," or the "putting it off" habit.

Man is mostly the sum of his memories—*Estey*.

Springtime—the time of the hoe and rake—"the happiest time of the year"!

A fixed principle is like a star—the darker the night the brighter it shines.

Do you feel the thrill of these spring days? If not, you need to see your doctor.

MORBIDITY REPORT FOR JANUARY, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet fever	Measles (morbilli)	Chas. measles (rubella)	Whooping cough	Chickenspox	Mumps	Pneumonia (acute lob v.)	Menigitis (epidemic)	Pollomyelitis (epidemic)	Influenza	Other diseases
The State					0	7	25	66	111	325	3	1	16,001	263
Allen, except*														
Iola*														
Anderson	0	0	0	1	1	0	0	1	0	1	0	0	37	0
Atchison, except	0	1	0	1	0	0	0	1	0	0	0	0	159	1
Atchison city	0	8	2	2	0	0	0	0	0	0	0	0	54	0
Barber	0	0	0	0	0	0	0	0	3	1	0	0	99	0
Barton, except	0	3	0	0	0	0	0	0	1	0	0	0	148	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	17	0
Bourbon, except	0	0	2	0	0	0	0	1	0	3	0	0	29	0
Fort Scott	0	0	0	0	0	0	0	0	0	0	1	0	26	3
Brown	1	7	0	1	0	0	0	0	2	1	0	0	198	0
Butler, except	0	1	2	1	1	0	2	0	0	14	1	0	606	0
Angus	0	0	1	1	1	0	1	0	1	6	0	0	80	1
El Dorado	0	0	0	1	0	0	0	0	0	3	0	0	121	8
Chase	0	5	0	1	0	0	0	0	0	0	0	0	102	0
Chautauque	0	0	0	0	0	0	0	0	0	0	0	0	28	0
Cherokee, except	0	1	3	5	0	0	0	0	0	6	0	0	269	1
Galena	0	2	0	2	0	0	0	0	0	1	0	0	174	1
Cherokee	0	0	0	0	0	0	0	0	0	1	0	0	14	0
Cherokee	0	0	1	1	1	0	0	0	2	1	0	0	8	0
Clark	0	0	0	0	0	0	0	0	0	0	0	0	143	0
Clay	0	2	0	0	2	0	0	1	0	0	0	0	93	0
Cloud, except	0	1	0	1	0	0	0	0	0	1	0	0	55	0
Concordia	0	0	0	0	0	0	0	0	0	6	0	0	117	0
Colfax	0	0	1	6	0	0	0	0	0	3	0	0	66	0
Comanche	0	0	0	0	1	0	0	2	0	0	0	0	174	0
Cowley, except	0	0	0	0	0	0	0	0	0	2	0	0	64	5
Arkansas City	0	0	0	0	0	0	1	3	1	1	0	0	120	4
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	667	2
Crawford, except	2	0	2	0	1	0	1	1	2	21	0	0	180	4
Pittsburg	0	2	0	1	1	0	0	0	0	0	0	0	32	0
Decatur	0	0	0	0	0	0	0	0	0	0	0	0	158	0
Dickinson	0	2	0	1	0	0	0	1	0	6	0	0	330	0
Doniphan	0	0	1	1	0	0	0	0	0	1	0	0	25	0
Douglas, except	0	0	0	3	3	0	0	0	1	0	0	0	43	3
Lawrence	0	0	2	2	7	0	0	0	1	0	0	0	104	0
Edwards	0	0	0	0	0	0	0	0	0	1	0	0	49	0
Elk	0	0	0	0	0	0	0	0	0	0	0	0	50	2
Ellis	1	0	0	0	1	0	0	0	0	0	0	0	111	1
Ellsworth	0	0	1	0	0	0	0	0	0	11	0	0	113	5
Finney	0	0	0	0	0	0	0	0	0	4	0	0	117	0
Ford, except	0	0	0	9	0	2	0	0	1	2	0	0	101	1
Dodge City	0	0	0	1	1	0	0	1	1	7	0	0	42	0
Franklin, except	0	0	0	0	0	0	0	0	0	0	0	0	54	0
Ottawa	0	0	5	0	0	0	0	0	0	1	0	0	0	0
Geary, except	0	0	1	5	0	0	0	0	1	0	0	0	6	5
Junction City	0	0	0	0	0	0	0	0	0	1	0	0	43	0
Gove	0	0	0	0	0	0	0	0	0	3	0	0	30	0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	83	0
Gray*														
Greely	0	0	0	0	0	0	0	0	0	0	0	0	252	0
Greenwood	0	7	0	0	0	0	0	0	9	9	0	0	79	0
Hamilton	0	0	0	0	0	0	0	1	0	0	0	0	246	0
Harper	0	3	0	0	1	0	0	1	0	5	0	0	67	0
Harvey, except	0	0	0	0	0	0	0	0	7	0	0	0	11	0
Newton	0	0	0	0	0	0	0	0	1	0	0	0	25	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	1	0	0	0	0	0	0	0	0	126	1
Jackson	0	0	0	1	0	0	0	0	0	0	0	0	108	1
Jefferson	0	1	0	0	0	0	0	0	8	1	0	0	255	0
Jewell	0	0	1	0	0	0	0	0	0	1	0	0	41	0
Johnson	0	0	2	0	0	0	0	0	0	0	0	0	23	0
Kearney	0	2	0	0	2	0	0	0	0	0	0	0	131	1
Kingman	0	0	0	0	1	0	5	0	0	1	0	0	260	0
Kiowa	0	0	0	0	0	0	0	1	0	2	0	0	64	7
Labette, except	0	0	0	0	0	0	0	1	0	7	0	0	179	7
Parsons	0	4	2	2	0	0	0	8	0	0	0	0	141	0
Lane	0	0	0	0	0	0	0	0	0	0	0	0	78	0
Leavenworth, except	2	0	10	0	0	0	0	0	2	3	0	0	40	61
Leavenworth	0	0	8	1	1	0	0	0	2	1	0	0		

MORBIDITY REPORT FOR JANUARY, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox . . .	Diphtheria...
Lincoln.....	0	0	0
Lincoln.....	0	0	1
Logan.....	0	0	0
Lyon, except.....	0	0	0
Emporia.....	0	0	1
Marion.....	0	1	2
Marshall.....	0	0	0
McPherson.....	0	0	1
Moave.....	0	0	0
Miami.....	0	0	4
Mitchell.....	0	0	0
Montgomery, except.....	0	4	1
Coffeyville.....	1	0	0
Independence.....	0	0	0
Morris.....	0	8	0
Morton.....	0	0	0
Nemaha.....	0	0	0
Nesmo, except.....	0	4	0
Chanute.....	0	14	0
Ness.....	0	0	0
Norton.....	0	0	0
Osage.....	0	0	0
Osborne.....	0	0	0
Ottawa.....	0	0	0
Pawnee.....	0	0	0
Phillips.....	0	0	1
Pottawatomie.....	0	1	1
Pratt.....	0	0	1
Rawlins.....	0	0	0
Reno, except.....	0	1	0
Hutchinson.....	0	0	0
Republic.....	0	2	1
Rice.....	0	0	0
Riley, except.....	0	2	0
Manhattan.....	0	0	9(a)
Rooks.....	0	0	0
Rush.....	0	0	0
Russell.....	0	0	1
Salina, except.....	0	0	0
Salina.....	0	1	0
Scott.....	1	0	0
Sedgwick, except.....	1	0	0
White.....	2	0	2
Seward.....	0	0	0
Shawnee, except.....	0	0	0
Topeka.....	0	1	2
Sheridan.....	0	0	0
Sherman.....	0	0	0
Smith.....	0	0	0
Stafford.....	0	0	1
Stanton.....	0	0	0
Stevens.....	0	0	0
Sumner, except.....	0	1	0
Wellington.....	0	0	0
Thomas.....	0	0	0
Trego.....	0	0	0
Wabaunsee.....	0	0	0
Wallace.....	0	0	0
Washington.....	0	0	0
Wichita.....	0	0	0
Wilson.....	0	0	0
Woodson.....	0	0	0
Wyandotte, except.....	0	2	0
Kansas City.....	2	0	14
Rosedale.....	0	0	0

(a) 3 carriers.

* No report. Other communicable diseases: Cancer, 12; chancreoid, 2; erysipelas, 5; gonococcus infection 175; meningitis (influenzal or pneumococcal), 2; ophthalmia neonatorum, 2; septic sore throat, 2; syphilis, 44; status, 2; trachoma, 6.

Food Analysis LX.

E. H. S. BAILEY, Director; W. S. LONG, Chemist in Charge.

BEVERAGES.

Those beverages which are marked "passed" or "illegal" are so marked from the standpoint of the enforcement of the food and drugs act, without reference to the enforcement of the prohibitory law.

22501. "Cider Vinegar Stock." Manufacturer, Baughman & Legge, Topeka, Kan. Passed.

22502. "Cider Vinegar Stock." Manufacturer, Baughman & Legge, Topeka, Kan. Passed.

22503. "Cider Vinegar Stock." Manufacturer, Baughman & Legge, Topeka, Kan. Passed.

22504. "Cider Vinegar Stock." Manufacturer, Baughman & Legge, Topeka, Kan. Passed.

22640. "Beverage." Sent in by attorney-general. Alcohol, 4.22 percent.

22641. "Beverage." Sent in by attorney-general. Alcohol, 1.41 percent.

22642. "Beverage." Sent in by attorney-general. Alcohol, 5.7 percent.

22643. "Beverage." Sent in by attorney-general. Alcohol, 0.8 percent.

22644. "Beverage." Sent in by attorney-general. Alcohol, 3.93 percent.

22645. "Beverage." Sent in by attorney-general. Alcohol, 6.14 percent.

22646. "Beverage." Sent in by attorney-general. Alcohol, 3.97 percent.

22658. "Cider." Sent in from Scott City. Alcohol, 5.40 percent.

60631. "Nehawka" Cider. J. Grainger, Lincoln, Neb., Manufacturer. Retailer, H. E. Harmonson, Norton, Kan. Fails to conform to standard. Illegal.

60639. "Cider." Prairie Brew Bottling Co., Kansas City, Kan. Passed.

81024. "Peerless Princess" Cider. Wichita Vinegar Works, Wichita, Kan., manufacturer and retailer. Passed.

92777. "Beverage." Unclaimed freight, A. T. & S. Fe Ry. Co., Topeka, Kan. Passed.

92778. "Beverage." Unclaimed freight, A. T. & S. Fe Ry. Co., Topeka, Kan. Passed.

92779. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 0.89 percent.

92780. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 8.32 percent.

92781. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 4.81 percent.

92782. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 10.27 percent.

92783. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 7.69 percent.

92784. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 2.17 percent.

92785. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 8.60 percent.

92786. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 1.69 percent.

92787. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 6.85 percent.

92788. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 7.34 percent.

92789. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 4.30 percent.

92790. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 9.62 percent.

92791. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 4.37 percent.

92792. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 7.13 percent.

92793. "Beverage." Unclaimed freight, A. T. & S. F. Ry. Co., Topeka, Kan. Alcohol, 6.43 percent.

CANDY.

22485. "Jelly Beans." Jobber, McCord-Kistler, Topeka, Kan. Retailer, John Lawrence, Clay Center, Kan. Passed.

22486. "Brilliant Dainties." Manufacturer, Sommer Richardson, St. Joseph, Mo. Retailer John Lawrence, Clay Center, Kan. Passed.

22488. "Chocolate Candy." "Elpan Nut." Manufacturer, Sommer Richardson, St. Joseph. Retailer, W. W. Downing, Clay Center. Passed.

2490. "Rosebud Chocolate." Sommer Richardson, manufacturer. Retailer, W. H. Funnel, Clay Center, Kan. Passed.

22491. "Chocolate M. M. Cigars." Manufacturers, Douglas Candy Co., St. Joseph. Retailer, "Bon Ton," Clay Center, Kan. Passed.

22492. "Candy Dumb Bells." Manufacturers, Douglas Candy Co., St. Joseph. Retailer, "Bon Ton," Clay Center, Kan. Passed.

22493. "Candy Watches." Manufacturers, Douglas Candy Co., St. Joseph. Retailer, "Bon Ton," Clay Center, Kan. Passed.

22496. "Creamed Acorns." Sommer Richardson, St. Joseph, Manufacturer. Retailer, H. J. Muth, Emporia, Kan. Passed.

22508. "Candy." Palace of Sweets, Topeka, Kan., retailer. Passed.

22509. "Mt. Caramel." Palace of Sweets, Topeka, Kan., retailer. Passed.

92580. "Switzer's Chocolate Soldiers." "High Grade" candy. Symms Merc. Co., Atchison, Kan., manufacturers. Retailer, R. J. Yokum, Rossville, Kan. Passed.

CANNED GOODS, PRESERVES, ETC.

22500. "Canned Corn." Gibson Canning Co., Gibson City, Ill. Retailer, Hutchinson Wholesale Grocery Co., Hutchinson, Kan. Passed.

22505. "Shaver" Canned Apples. Put up for Shaver & Son, Frederick, Md., Santa Fe unclaimed freight, Topeka, Kan. Passed.

22506. "Shaver" Canned Apples. Put up for Shaver & Son, Frederick, Md., Santa Fe unclaimed freight, Topeka, Kan. Passed.

22510. "Summer Girl" Canned Corn. The H. D. Lee Merc. Co., Kansas City, Mo. Sent in by State Hospital, Topeka, Kan. Passed.

50045. "Dawson" Apple Butter. Put up by Dawson Bros. Mfg. Co., Memphis, Tenn. Retailer, Lux Merc. Co., Topeka, Kan. A moldy, fermented product. Alcohol, 4.88 percent. Illegal.

92700. "Silver Leaf Strawberry & Apple Jam." Kuehne Bros., Topeka, Kan. Senne Bros., Topeka, Kan., retailers. Insufficient fruit.

92702. "Punch Red Raspberry and Apple Jam." Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, Sam Rice & Son, Topeka, Kan. Passed.

92703. "Summer Girl Apple and Cherry Preserves." The H. D. Lee Merc. Co., Salina, Kan., and Kansas City, Mo. Retailer, Thomas Horsfield, Topeka. Insufficient fruit.

92704. "Summer Girl Apple and Strawberry Preserves." The H. D.

Lee Merc. Co., Salina, Kan., and Kansas City, Mo. Retailer, Thomas Horsfield, Topeka, Kan. Passed.

92705. "Dawson's" Strawberry Preserves. Jobber, the H. D. Lee Merc. Co., Salina, Kan., and Kansas City, Mo. Lux Merc. Co., Topeka, Kan. Insufficient fruit.

92706. "Dawson's" Blackberry Preserves. Jobber, the H. D. Lee Merc. Co., Salina and Kansas City. Lux Merc. Co., Topeka, Kan. Insufficient fruit.

92707. "Dawson's" Pear Preserves. (Small type, "with apple juice.") jobber, The H. D. Lee Merc. Co. Lux Merc. Co. Topeka, Kan. Insufficient fruit

92708. "Dawson's" Peach Preserves. Jobber, the H. D. Lee Merc. Co., Salina, Kan., and Kansas City, Mo. The Lux Merc. Co., Topeka, Kan. Insufficient fruit.

92709. "Silver Leaf Brand" Pineapple and Apple Jam. Kuehne Bros., Topeka, manufacturers. Retailer, H. Offen, Exchange Store, Topeka, Kan. Insufficient fruit.

92710. "Silver Leaf Brand" Peach and Apple Jam. Kuehne Bros., Topeka, Kan., manufacturers. Retailers, H. Offen, Exchange Store, Topeka, Kan. Insufficient fruit.

92711. "Silver Leaf Brand" Strawberry and Apple Jam. Kuehne Bros., Topeka, Kan., manufacturers. Retailers, H. Offen, Exchange Store, Topeka, Kan. Insufficient fruit. Fermented. Illegal.

EGG SUBSTITUTES.

22512. "Eggno." Newton Tea & Spice Co., Cincinnati, Ohio. Illegal Misbranded.

22513. "Eggoe." Eggoe Co., Marshalltown, Iowa. Illegal. Misbranded.

22514. "Eggnit." C. H. Stuart & Co., Newark, N. Y. Retailer, Mrs. Mollohan, Chanute, Kan. Illegal. Misbranded.

22515. "Agosave." American Products Co., Cincinnati, Ohio. Illegal. Misbranded.

22521. "Yelco." Yelco Pure Products Co., Minneapolis, Minn. Illegal. Misbranded.

22622. "Eggola." Wixon Spice Co., Chicago, Ill. Jobber, H. Baden, Independence, Kan. Illegal. Misbranded.

92576. "Eggette." Bestever Products Company, Chicago. Illegal. Misbranded.

92577a. "Magic Egg Saver." Ward & Co., Chicago, Ill. Retailer, George F. Jackson, Topeka, Kan. Illegal. Misbranded.

92596. "Eggine." Charles J. Morrison Co., Chicago, Ill. Illegal. Misbranded.

EXTRACTS AND IMITATIONS.

22634. "A. B. S." Lemon Extract. Symms Grocery Co., Atchison, Kan. Passed.

22635. "A. B. S." Vanilla. Symms Grocery Co., Atchison, Kan. Artificially colored. Illegal.

22637. "Comp. Extract Vanillin, Vanilla, Tonka and Coumarin." "A. B. S." Symms Grocery Co., Atchison, Kan. Artificially colored. Illegal.

22638. "Composition Lemon and Citrol Flavor." Symms Grocery Co., Atchison, Kan. A very diluted product. Illegal.

FISH.

50046. "Blue Sea" Canned Crayfish. Producer, the San Juan Canning Co., Friday Harbor, Wash. Retailer, the Lux Mercantile Co., Topeka, Kan. Odor strongly ammoniacal. Illegal.

50047. "Blue Sea" Canned Crayfish. Producer, the San Juan Can-

ning Co., Friday Harbor, Wash. Retailer, the Lux Mercantile Co., Topeka, Kan. Excess tin. Illegal.

60635. "Fish Flakes." Jobber, The H. D. Lee Mercantile Co., Salina, Kan., and Kansas City, Mo. Retailer, B. S. Chance, Delphos, Kan. Passed.

60636. "Panama" Fish. Jobber, the Kansas City Wholesale Grocery Co., Kansas City, Mo. Retailer, J. W. Hull, Solomon, Kan. Passed.

60637. "Albacure" Fish. Canner, the California Tunny Fish Co., Albacure, Cal. Retailer, A. Carpenter, Solomon, Kan. Passed.

70839. "Codfish and Haddock." "Gorton's." Gorton-Pew Fisheries Co., Gloucester, Mass. Retailer, Dundee Mercantile Co., Dundee, Kan. Passed.

70840. "B. & M. Fish Flakes." Burnham & Morrill Co., Portland, Ore. Retailer, Raines Bros., Garfield, Kan. Passed.

70841. "F. F. O. G." Flaked Fish. Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, S. C. Olson, Garfield, Kan. Passed.

70842. "All-Ready" Codfish and Haddock. A. C. L. Haase & Sons Fish Co., St. Louis, Mo. G. W. Nolan, Larned, Kan. Passed.

70843. "Red Band Jewell" Shredded Codfish. J. W. Beardsley's Sons, New York. Retailer, A. E. Brodstreet, Dighton, Kan. Passed.

70844. "Star" Codfish. Gorton-Pew Fisheries Co., Gloucester, Mass. Retailer, Fariman & Co., Fulton, Kan. Passed.

92578a. "B. & M." Fish Flakes. Jobber, McCord-Kistler Mercantile Co., Topeka, Kan. Retailer, Lewis Mercantile Co., Rossville, Kan. Short weight. Illegal.

92879a. "Invader" Boneless Codfish. Jobber, McCord-Kistler Mercantile Co., Topeka, Kan. Retailer, Lewis Mercantile Co., Rossville, Kan. Passed.

MILK AND CREAM.

50017. Milk. W. C. Parrish, Lawrence, Kan. Solids not fat, 8.26 percent. Visible dirt present. Illegal.

50018. Cream. J. J. Smith, Lawrence, Kan. Passed.

50019. Milk. J. J. Smith, Lawrence, Kan. Fat 2.8 percent. Visible dirt present. Illegal.

50020. Milk. C. D. Kelley, Lawrence, Kan. Nonfat solids, 8.17 percent. Visible dirt present. Illegal.

50021. Milk. Arthur Fritz, Lawrence, Kan. Passed chemically.

50022. Milk. H. H. Brown, Lawrence, Kan. Passed.

50023. Milk. A. E. Messenheimer, Lawrence, Kan. Watered. *B. coli* present. Illegal.

50024. Cream. A. E. Messenheimer, Lawrence, Kan. *B. coli* present. Passed chemically.

50025. Milk. H. J. Dissenger, Lawrence, Kan. Fat, 2.3 percent. Watered. Much dirt present. Illegal.

50026. Milk. H. J. Dissenger, Lawrence, Kan. Fat, 2.8 percent. Watered. Visible dirt. Illegal.

50027. Milk. H. J. Dissenger, Lawrence, Kan. Watered. Visible dirt present. Illegal.

50028. Milk. W. O. Starnes, Lawrence, Kan. Bacteria, 440,000. Passed chemically.

50029. Cream. W. O. Starnes, Lawrence, Kan. Bacteria present, 5,700,000. Passed chemically.

50030. Milk. H. H. Chamney, Lawrence, Kan. Watered. Bacteria present, 320,000. Visible dirt present. Illegal.

50031. Milk. H. H. Chamney, Lawrence, Kan. Passed.

50032. Cream. H. H. Chamney, Lawrence, Kan. Fat, 17 percent. Illegal.

50033. Skimmed milk. A. R. Kagi, Lawrence, Kan. Fat, 2.4 percent. Skimmed. Passed.

50034. Skimmed milk. A. R. Kagi, Lawrence, Kan. Fat, 2.45 percent. Nonfat solids, 8.4 percent. Illegal.

50035. Milk. A. R. Kagi, Lawrence, Kan. Passed.

50036. Milk. A. R. Kagi, Lawrence, Kan. Visible dirt present. Passed chemically.

50037. Milk. A. R. Kagi, Lawrence, Kan. Fat, 2.8 percent. Solids not fat, 7.1 percent. Watered. Illegal.

50038. Cream. A. R. Kagi, Lawrence, Kan. Fat, 17.5 percent. Illegal.

50039. Milk. J. A. Winchell, Lawrence, Kan. Bacteria, 250,000. Passed chemically.

50040. Milk. J. A. Winchell, Lawrence, Kan. Bacteria, 230,000. Passed chemically.

70860. Milk. Dodge City Ice Cream and Produce Co., Dodge City, Kan. Passed.

70866. Milk. E. C. Sturgeon, Dodge City, Kan. Fat, 3.1 percent. Illegal.

92660. Milk. William Conlon, Atchison, Kan. Fat, 3.0 percent. Illegal.

92661. Milk. William Conlon, Atchison, Kan. Fat, 3.17 percent. Illegal.

92662a. Milk. H. N. Graves, Atchison, Kan. Fat, 2.9 percent. Illegal.

92662b. Milk. H. N. Graves, Atchison, Kan. Fat, 2.92 percent. Illegal.

92663. Milk. Broken in transit.

92664. Milk. W. H. Conlon, Atchison, Kan. Fat, 3.0 percent. Illegal.

92665. Milk. W. H. Conlon, Atchison, Kan. Passed.

92666. Milk. W. H. Conlon, Atchison, Kan. Passed.

92667. Milk. W. H. Conlon, Atchison, Kan. Passed.

92668. Milk. S. C. Messenheimer, Lawrence, Kan. Passed.

92671. Cream. R. F. Maley, Coronado Hotel, Wichita, Kan. Passed.

92672. Cream. J. C. Taylor. Wichita, Kan. Fat, 9 percent. Illegal.

92691. Cream. R. F. Maley, Coronado hotel, Wichita, Kan. Fat, 9.5 percent. Illegal.

92692. Cream. The Steffens Ice and Ice Cream Co., Wichita, Kan. Passed.

92693a. Cream. Harvey House cafe, Wichita, Kan. Passed.

92693b. Cream. William McCarty, Waldorf cafe, Wichita, Kan. Fat, 4.9 percent. Illegal.

92695. Cream. H. Magill, Wichita, Kan. Fat, 12.5 percent. Illegal.

92696. Cream. Poole & Bade, Good Eats cafe, Wichita, Kan. Fat, 12 percent. Illegal.

92725. Cream. Sam W. Carr, Wichita, Kan. Fat, 11.1 percent. Illegal.

92727. Cream. Gus Pappas, Gus Athens, Jas. Pope, Wichita. Fat, 6 percent. Illegal.

ICE CREAM.

70859. Ice cream. Manufacturer, Dodge City Ice Cream and Produce Company, Dodge City. Passed.

70861. Ice cream. Manufacturer, E. C. Sturgeon, Dodge City. Passed.

70862. Ice cream. Manufacturer, E. C. Sturgeon, Dodge City. Passed.

70863. Ice cream. Manufacturer, M. M. Gwinner, Dodge City. Passed.

70864. Fruit ice cream. Manufacturer, M. M. Gwinner, Dodge City. Passed.

70865. Ice cream. Manufacturer, John Felker, Dodge City. Passed.

81036. Ice cream. Manufacturer, Grovier Product Co., Great Bend. Retailer, Hooper Drug Co., Great Bend. Passed.

81037. Ice cream. Manufacturer, Great Bend Ice and Fuel Company, Great Bend. Retailer, Johnson and Dodge, Great Bend. Passed.
81038. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Passed.
81039. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Passed.
8140. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Passed.
81041. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Passed.
81042. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Passed.
81043. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Passed.
81044. Ice cream. Manufacturer, Peter Kacklaues, Kansas City. Passed.
81045. Ice cream. Manufacturer, Peter Kacklaues, Kansas City. Passed.
81046. Ice cream. Manufacturer, George W. Atwood, Kansas City. Fat, 10.2 percent. Illegal.
81047. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Retailer, Boden & Johnson, Kansas City. Passed.
81048. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Retailer, L. L. Brown, Kansas City. Passed.
81049. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Retailer, Simpson Block Drug Company, Kansas City. Passed.
81050. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Retailer, F. J. Pietrzyk, Kansas City. Passed.
81051. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Retailer, L. J. Rogers, Kansas City. Passed.
81052. Ice cream. Manufacturer, Myers Sanitary Milk Co., Kansas City. Retailers, Hassig Bros. Drug Co., Kansas City. Passed.
81053. Ice cream. Manufacturer, DeCoursey Company, Kansas City. Retailers, Hassig Bros. Drug Co., Kansas City. Passed.
81054. Ice cream. Manufacturer, Sewall & Jackman, Independence. Fat, 9.75 percent. Illegal.
81055. Ice cream. Manufacturer, Sewall & Jackman, Independence. Fat, 8 percent. Illegal.
81056. Fruit ice cream. Manufacturer, Sewall & Jackman, Independence. Fat, 8.75 percent. Illegal.
81057. Ice cream. Manufacturer, Olympic Candy Co., Independence. Fat, 12.50 percent. Illegal.
81058. Ice cream. Manufacturer, Purity Ice Cream Co., Iola. Retailer, Sunflower Pharmacy, Independence. Fat, 9.50 percent. Illegal.
81060. Ice cream. Manufacturer, Bauer & Son, Cherryvale. Fat, 10.60 percent. Illegal.
81061. Caramel Nut ice cream, Bauer & Son, Cherryvale. Fat, 11 percent. Illegal.
81062. Ice cream. Manufacturer, J. A. Warren, Coffeyville. Fat, 12.50 percent. Illegal.
81063. Ice cream. Manufacturer, J. A. Warren, Coffeyville. Fat, 13.50 percent. Illegal.
81064. Ice cream. Manufacturer, J. A. Warren, Coffeyville. Fat, 10.75 percent. Illegal.
81065. Ice cream. Manufacturer, J. M. Irvin, Coffeyville. Fat, 11 percent. Illegal.
81066. Ice cream. Manufacturer, J. M. Irvin, Coffeyville. Fat, 7.75 percent. Illegal.
81067. Ice cream. Manufacturer, K. C. Conkoulis, Coffeyville. Passed.

92673. Ice cream. Manufacturer, Deer Creek Creamery Co., Atchison. Passed.
92674. Ice cream. Manufacturer, The Franklin Ice Cream Company, Kansas City. Retailers, Walters-Behrens, Atchison. Passed.
92675. Ice cream. Manufacturer, F. F. Dolgert, Atchison. Passed.
92676. Ice cream. Manufacturer, Atchison Candy Kitchen, Atchison. Fat, 8.5 percent. Illegal.
92677. Ice cream. Manufacturer, C. V. Jacobs, Atchison. Passed.
92678. Ice cream. Manufacturer, Deer Creek Creamery Co., Atchison. Retailer, Felix Paoluccia, Atchison. Passed.
92679. Ice cream. Manufacturer, F. Ruzo, Atchison. Passed.
92680. Ice cream. Manufacturer, Deer Creek Creamery Co., Atchison. Retailers, Marins Brothers, Atchison. Passed.
92681. Ice cream. Manufacturer, Leavenworth Dairy and Creamery Company, Leavenworth. Fat, 10 percent. Illegal.
92682. Ice cream. Manufacturer, Frey & Hedges Creamery Company, Leavenworth. Fat, 10 percent. Illegal.
92683. Ice cream. Manufacturer, Frey & Hedges Creamery Company, Leavenworth. Fat, 8 percent. Illegal.
92684. Fruit ice cream. Manufacturer, Frey & Hedges Creamery Company, Leavenworth. Fat, 10 percent. Illegal.
92685. Ice cream. Manufacturer, Frey & Hedges Creamery Company, Leavenworth. Fat, 8 percent. Illegal.
92686. Ice cream. Manufacturer, Frey & Hedges Creamery Company, Leavenworth. Retailers, The Chocolate Shop, Leavenworth. Fat, 9 percent. Illegal.
92687. Ice cream. Manufacturer, Frey & Hedges, Leavenworth. Retailers, Orpheum Pharmacy, Leavenworth. Fat, 11 percent. Illegal.
92688. Ice cream. Manufacturer, The Leavenworth Dairy and Creamery Company, Leavenworth. Retailers, Reagen Brothers. Leavenworth. Fat, 9 percent. Illegal.
82689. Ice cream. Manufacturer, The Leavenworth Dairy and Creamery Company, Leavenworth. Retailers, The Klean Kandy Kitchen, Leavenworth. Fat, 10 percent. Illegal.
92761. Ice cream. Manufacturer, W. H. Snyder Ice Cream Co., Wichita. Passed.
92762. Fruit ice cream. Manufacturer, W. H. Snyder Ice Cream Co., Wichita. Passed.
92763. Ice cream. Manufacturer, W. H. Snyder Ice Cream Co., Wichita. Passed.
92764. Ice cream. Manufacturer, W. H. Snyder Ice Cream Co., Wichita. Passed.
92765. Ice cream. Manufacturer, Ed Cero, Wichita. Passed.
92766. Ice cream. Manufacturer, Kansas Candy Kitchen, Wichita. Passed.
92767. Ice cream. Manufacturer, The Steffens-Bretch Ice and Ice Cream Co., Wichita. Passed.
92768. Ice cream. Manufacturer, The Steffens-Bretch Ice and Ice Cream Company, Wichita. Passed.
92769. Ice cream. Manufacturer, The Steffens-Bretch Ice and Ice Cream Company, Wichita. Passed.
92770. Fruit ice cream. Manufacturer, The Steffens-Bretch Ice and Ice Cream Company, Wichita. Passed.
92771. Ice cream. Manufacturer, The Steffens-Bretch Ice and Ice Cream Company, Wichita. Passed.
92772. Ice cream. Manufacturer, The New York Candy Kitchen, Wichita. Passed.
92773. Ice cream. Manufacturer, Cosmos Moulos, Wichita. Passed.
92774. Fruit ice cream. Manufacturer, Cosmos Moulos, Wichita. Passed.

VINEGAR.

60604. "Vinegar." Prairie Brew Cider Vinegar Co., Kansas City, Kan. Does not conform to the standard. Illegal.

60606. "Stark Cider Vinegar." Stark Manufacturing Co., Atchison, Kan. Retailer, George Groegoff, Kansas City, Kan. Passed.

60609. "Old Glory Vinegar." Emrich Vinegar Co., Kansas City, Mo. Retailer, Griswold & Son, Kansas City, Kan. Passed.

60610. "Mirbell" Vinegar. Kansas Wholesale Grocery Co., Kansas City. Retailer, J. H. Wallin, Kansas City, Kan. Passed.

60619. "Lehman's High Grade Apple Cider Vinegar." R. H. Lehman, Pittsburg, Pa. Retailer, Union Pacific Tea Co., Kansas City, Kan. Passed.

60621. "F. F. O. G." Vinegar. Jobbers, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, L. Fild, Kansas City, Kan. Passed.

60627. "Krapple Cider Vinegar." Manufactured for Nara McCord, St. Joseph, Mo. Retailer, J. B. McKinney, Dresden, Kan. Passed.

60628. "Fairbury Cider Vinegar." Manufactured for Rosse Wholesale Grocery Co., Fairbury, Neb. Retailer, Eakin Bros., Dresden, Kan. Diluted. Illegal.

60629. "Green County Cider Vinegar." Gist Leo Vinegar Co., Springfield, Mo. Retailer, Eaken Bros., Dresden, Kan. Does not conform to standard. Illegal.

60630. "Luxa" Cider Vinegar. Manufactured for Groneng, Council Bluffs, Iowa. Retailer, H. E. Harmonson, Norton, Kan. Passed.

60632. "H" Cider Vinegar. Manufactured by Haarmann Vinegar Co., Omaha, Neb. Retailer, Ray Care, Long Island, Kan. Does not conform to standard. Illegal.

60633. "Gypsy Boy." Cider Vinegar. Manufactured for Dolan Mercantile Co., Atchison, Kan. Retailer, Farmer's Union, Atchison, Kan. Passed.

60634. "Mogul" Cider Vinegar. Groening, Council Bluffs, Iowa. Retailer, Charles Shelley, Alma, Kan. Passed.

60638. "Cider Vinegar." F. A. Maynard, Salina, Kan., manufacturer. Retailer, A. Carpenter, Solomon, Kan. Does not conform to standard. Illegal.

81025. "Cider Vinegar." Wichita Vinegar Works, Wichita, Kan., manufacturer and retailer. Passed.

92657. "Cider Vinegar." Jobber, Speas Vinegar Co., Kansas City, Mo. Retailer, Kuehne Bros., Topeka, Kan. Substandard. Illegal.

92658. "Cider Vinegar." Jobber, Speas Vinegar Co., Kansas City, Mo. Retailer, Kuehne Bros., Topeka, Kan. Substandard. Illegal.

92659. "Cider Vinegar." Jobber, Speas Vinegar Co., Kansas City, Mo. Retailer, Kuehne Bros., Topeka, Kan. Substandard. Illegal.

92659. "Colored Vinegar." Retailer, the Robinson Co., Augusta, Kan. Colored distilled vinegar. Illegal.

92670. "Cider Vinegar." Retailer, Abe Pinsketa, Augusta, Kan. Colored distilled vinegar. Illegal.

92643. "Cider Vinegar." Marshall Vinegar Co., Marshalltown, Iowa, manufacturer. Retailer, H. Priest, Atchison, Kan. Passed.

92594. "Cider Vinegar." Manufactured by the Wichita Vinegar and Bottling Co., Wichita, Kan. Retailer, Addis Bros., Wichita, Kan. Passed.

PEANUT BUTTER.

22639. "Peanut Butter." From Hillsboro, Kan. Examination for glass. None present. Passed.

70829. "Peanut Butter." Jobber, the H. D. Lee Mercantile Co., Salina, Kan., and Kansas City, Mo. Retailer, Ray Bros., Lewis, Kan. Passed.

70830. "White Star" Peanut Butter. Packed for the Winfield Wholesale Grocery Co., Winfield, Kan. Retailer, J. B. Vosberg, Lewis, Kan. Passed.

70831. "Bar-B-Q" Peanut Butter. Packed for Jett & Wood, Wichita, Kan. Retailer, John S. Pollock, Stafford, Kan. Passed.

70832. "Harvest Home" Peanut Butter. Distributed by Jett & Wood, Wichita, Kan. Retailer, John S. Pollock, Stafford, Kan. Passed.

70833. "Heinz" Peanut Butter. H. J. Heinz, Pittsburg, Pa. Retailer, John S. Pollock, Stafford, Kan. Passed.

70834. "Derby" Peanut Butter. Jobbers, Swift & Co., Kansas City, Kan. Retailer, Seamster & Winebright, St. John, Kan. Passed.

70835. "Pallas" Peanut Butter, Jobber, Ridenour, H. L. Gear, Kinsley, Kan. Passed.

70836. "Beechnut" Peanut Butter. The Beechnut Packing Co., Canajoharie, N. Y. Retailer, W. M. Bush, Kinsley, Kan. Passed.

70837. "Besto" Peanut Butter. Walter J. Hirsch, Chicago, Ill. Retailer, Otto Sonder, Wright, Kan. Passed.

70838. "Golden Robin" Peanut Butter. Packed for Hutchinson Wholesale Grocery Co., Hutchinson, Kan. Retailer, Sweet Mercantile Co., Dodge City, Kan. Passed.

NUTS.

22694. "English Walnuts." Muller Keller, St. Joseph, Mo., jobber. May & Son, Emporia, Kan., retailer. Passed.

22495. "Chestnuts." Patterson Commission Co., Emporia, Kan. Passed.

92581. "English Walnuts." Frank P. Kruger, New York, jobber. The Crockett Mercantile Co., Topeka, Kan., retailer. Percent of nuts unfit for food, 29. Illegal.

92588. "English Walnuts." The Lux Mercantile Co., Topeka, Kan. Nuts unfit for food, 5 percent.

92593. "English Walnuts." The Theodore Poehler Mercantile Co., Topeka, Kan. Nuts unfit for food, 3.6 percent.

92594. "English Walnuts." The Theodore Poehler Mercantile Co., Topeka, Kan. Nuts unfit for food, 16 percent.

92595. "English Walnuts." The Theodore Poehler Mercantile Co., Topeka, Kan. Nuts unfit for food, 6 percent.

92608. "English Walnuts." The Theodore Poehler Mercantile Co., Topeka, Kan. Six samples. Nuts unfit for food, No. 1, 15.7 percent; No. 2, 19 percent; No. 3, 7.3 percent; No. 4, 7.7 percent; No. 5, 22.8 percent; No. 6, 5 percent.

SYRUP.

60607. "Nectar" Syrup. Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, Griswold & Son, Kansas City, Kan. Passed.

60608. "Pallas" Syrup. Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, Griswold & Son, Kansas City, Kan. Passed.

60611. "Mary Jane" Syrup. Manufactured by the Corn Products Co., New York. Retailer, J. L. Wallin, Kansas City, Kan. Passed.

60612. "Karo" Syrup. Manufactured by the Corn Products Co., New York. Retailer, J. L. Wallin, Kansas City, Kan. Passed.

60613. "Summer Girl" Syrup. Jobber, The H. D. Lee Merc. Co., Salina, Kan., and Kansas City, Mo. Retailer, J. L. Wallin, Kansas City, Kan. Passed.

60614. "Golden Brown" Syrup. Manufactured by Stewart Knatz & Co., Baltimore, Md. Retailers, the Union Pacific Tea Co., Kansas City, Kan. Passed.

60615. "B & B" Syrup. Manufactured by the Southern Molasses Co., New York. Retailer, the Union Pacific Tea Co., Kansas City, Kan. Passed.

60616. "Brer Rabbit" Syrup. Manufactured by Pineck & Ford, New Orleans. Retailer, the Union Pacific Tea Co., Kansas City, Kan. Passed.

60617. "Di Fe" Syrup. Manufactured by Rigney & Co., Brooklyn and New York. (Maple, 15 percent.) Retailer, the Union Pacific Tea Co., Kansas City, Kan. Passed.

60618. "Colonial" Maple Syrup. Manufactured by Rigney & Co., Brooklyn and New York. Retailer, the Union Pacific Tea Co., Kansas City, Kan. Passed.

60620. "Raven" Syrup. Manufacturer, the New Orleans Coffee Co., New Orleans. Retailer, L. Fild, Kansas City, Kan. Passed.

60622. "Karo" Syrup. Manufactured by the Corn Products Co., New York. Retailer, Farmers' Store, Russell, Kan. Passed.

60623. "Mandy Lane" Syrup. Manufactured by Pineck & Ford, New Orleans. Retailers, Farmers' Store, Russell, Kan. Passed.

60624. "White Crane" Syrup. Manufactured by the Bliss Refining Co., Kansas City, Mo. Retailer, Farmers' Store, Russell, Kan. Passed.

60625. "Bear" Syrup. Manufactured by the Bliss Refining Co., Kansas City, Mo. Retailer, Farmers' Store, Russell, Kan. Passed.

60626. "Syrup." Manufactured for Pineck & Ford, New Orleans. Retailer, Farmers' Store, Russell, Kan. Passed.

22516. "Sorghum." The Fort Scott Sorghum Co., Fort Scott, Kan. Passed.

70856. "Sunshine Sorghum." The Fort Scott Syrup Co., Fort Scott, Kan., manufacturer. Retailer, Kaufman Bros., Fort Scott, Kan. Passed.

70857. "Sorghum." Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, the Wilson Mercantile Co., LaCygne, Kan. Corn syrup, 18 percent. Presence of corn syrup not declared. Illegal.

MISCELLANEOUS.

22487. "Roast Peanuts, No. 1." Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, John Lawrence, Clay Center, Kan. Passed.

22489. "Preserva." Preserva Manufacturing Co., Galion, Ohio. User, Burdick Meat Market. Sulphur, 90 percent.

22636. "Catsup." "Old Inn." Curd & Blakemore Co., Louisville, Ky. Retailer, Dodge City Wholesale Grocery Co., Dodge City, Kansas. Excessive yeasts and spores.

70858. "Corn Fluten Flour." Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, H. M. Knox, Garden City, Kan. Gluten, none.

81013 "Virginia Sweet" Pancake Flour. Greiger-Fishback Co., Indianapolis, Ind., and Kansas City, Mo. Retailer, Olson & Sons, Stark, Kan. Passed.

81014 "The Best" Pancake Flour. Jobber, The H. D. Lee Mercantile Co., Salina and Kansas City, Mo. Retailer, Olson & Sons, Stark, Kan. Passed.

81018. "Buckwheat Flour." Jobber, The H. D. Lee Mercantile Co., Salina. Retailer, R. T. Chaney, Stark, Kan. Passed.

92568. "Fruit Acid Solution." Citric Acid. Passed.

92715. "Ivanhoe" Catsup. Franklin McVeagh & Co., Chicago, Ill. Retailer, The Dibble Grocery Co., Topeka, Kan. Excessive yeasts and spores.

92718. "Gelatine." W. J. Kahn, Chicago. Jobber, The Theodore Poehler Mercantile Co., Topeka, Kan. Passed.

92719. "Gelatine." The Davis Mercantile Co., Topeka, Kan. Jobber, The Theodore Poehler Mercantile Co., Topeka, Kan. Passed.

92720. "Oatman's" Evaporated Milk. The Oatman Condensed Milk Co., Dundee, Ill. Retailer, Heinley & Kanoff, Topeka, Kan. Passed.

92721. "Sweet Clover" Evaporated Milk. The Hope Condensed Milk Co., Hope, Kan. Retailer, Heinley & Kanoff, Topeka, Kan. Passed.

92724. "Egg Noodles." "American Beauty." The Denver Macaroni & Noodle Co., Denver, Colo. Retailer, Heinley & Kanoff, Topeka, Kan. Passed.

Prosecutions

JULY 1, 1917, TO JANUARY 1, 1919.

Name, City, Date Filed, Charge and Termination, Inspector.

- T. Zervakos, A. Spiras, J. Zouzas, Atchison Candy Kitchen, Atchison. 5-24-18. Manufacturing adulterated ice cream. Fine, \$25. 6-5-18. I.
- Frank LaPorte, Augusta. 4-9-18. Sale of colored distilled vinegar for cidar vinegar. Fine, \$10. 4-9-18. I.
- Bert Doty, Augusta Ice Company, Augusta. 6-26-18. Sale of short-weight ice; four counts. Fine, \$25. 6-27-18. I.
- Richard McKenzie, Bancroft Cash Store, Bancroft. 9-4-18. Offering for sale decomposed eggs. Fine, \$10. 9-4-18. I.
- H. J. Grundmeier, Barnard. 1-25-18. Manufacturing of adulterated ice cream. Fine, \$10. 1-25-18. I.
- O. J. Queen, Bayard Mercantile Co., Bayard. 7-13-18. Offering for sale decomposed eggs. Fine, \$5. 7-13-18. D.
- N. H. Canfield, Burr Oak. 12-8-17. Manufacturing adulterated ice cream. Fine, \$1. I.
- F. W. Duensing, Cedarvale. 9-3-17. Sale substandard ice cream. Fine, \$10. 9-3-17. R.
- J. C. Dexter, Centerville. 7-12-18. Offering for sale decomposed eggs. Fine, \$5. 7-12-18. D.
- Hiram Riddle, Chetopa. 1-8-18. Violation sanitary law by polluting well. 1-8-18. F. and D.
- Al. Bloom, Farmers' Union Store, Clifton. 9-5-18. Offering for sale decomposed eggs. Fine, \$10. I.
- Ed. Smies, Clifton. 9-5-18. Offering for sale decomposed eggs. Fine, \$10. I.
- Mrs. E. A. MaKinney, Columbus. 6-27-17. Manufacturing adulterated ice cream. Fine, \$5. 8-14-17. R.
- Mrs. E. A. MaKinney, Columbus. 8-26-18. Sale of adulterated ice cream. Fine, \$25. 8-26-18. D.
- K. C. Conkoulis, Coffeyville. 6-18-17. Manufacturing adulterated ice cream. Fine, \$15. R.
- James Matinas, Coffeyville. 6-18-17. Manufacturing adulterated ice cream. Fine, \$15. 11-30-17. R.
- J. A. Warren, Coffeyville. 6-18-17. Manufacturing adulterated ice cream. Fine, \$25. 11-30-17. R.
- J. M. Irvin, Coffeyville. 7-31-18. Manufacturing adulterated ice cream. Fine, \$25. 7-21-18. D.
- O. O. Lease, Manager D. J. Churchill Meat Market, Concordia. 12-7-17. Manufacturing adulterated lard. Fine, \$25. 12-7-17. I.
- D. J. Churchill, proprietor Meat Market, Concordia. 12-7-17. Manufacturing adulterated lard. Fine, \$10. 12-7-17. I.
- E. L. Getty, Downs. 5-11-17. Sale dirty and adulterated milk. Fine, \$15. 5-11-17. I.
- E. L. Getty, Downs. 12-6-17. Sale adulterated milk. Fine, \$25. 12-6-17. I.
- Martin Kokama, Downs. 5-11-17. Sale dirty milk. Fine, \$15. 5-11-17. I.
- Martin Kokama, Downs. 12-6-17. Sale adulterated milk. Fine, \$25. 12-6-17. I.
- F. A. Baker, Downs Ice Cream and Bottling Works, Downs. 5-11-17. Manufacturing adulterated ice cream. Fine, \$15. 5-11-17. I.
- J. C. Arnold, Edna. 8-15-17. Offering for sale decomposed eggs. Fine, \$10. 8-15-17. D.
- E. D. McCreary, El Dorado. 10-3-17. Insanitary bake shop. Fine and costs, \$27.50. 10-3-17. D.
- C. Darkis, El Dorado. 10-3-17. Insanitary hamburger and beverage stand. Fine and costs, \$17.50. 10-3-17. D.
- H. and Z. Thomason, El Dorado. 10-4-17. Insanitary bakery. Fine and costs, \$22.50. 10-4-17. D.
- Williams and Hudson, El Dorado. 10-5-17. Insanitary bakery. Fine and costs, \$32.50. 10-6-17. D.
- C. G. Seymour, El Dorado. 10-5-17. Insanitary restaurant. Fine and costs, \$27.50. 10-9-17. D.
- R. L. Cox, El Dorado. 10-6-17. Insanitary restaurant. Fine and costs, \$27.50. 10-10-17. D.
- Burford Jenkins, El Dorado. 12-5-17. Polluting stream with dead animals. Fine and costs, \$32.85. 12-6-17. D.
- N. L. Axton, Manager El Dorado Electric and Refrigerator Company, El Dorado. 6-26-18. Sale short-weight ice, four counts. Fine, \$25 and costs. 6-26-18. I.
- L. J. Reischman, El Dorado. 10-23-18. Insanitary bakery. Fine, \$25 and costs. 10-23-18. D.
- Ferguson Brothers, Elk Falls. 7-29-18. Offering for sale decomposed eggs. Fine, \$10. 7-29-18. D.
- J. M. Brickey, Emporia. 8-31-17. Violation of nuisance law by dumping dead animals in vacant lot. Fine and costs, \$20. R.
- Wm. M. Buck, Emporia. 2-27-18. Killing meat in an insanitary manner. Fine, \$5. 2-27-18. D.
- C. B. Highbargin, Eureka. 4-11-18. Selling spirits of camphor below U. S. P. standards. Fine, \$5. 4-11-18. D.
- W. A. Breeden, Fiatt. 7-29-18. Shipping and selling decomposed eggs. Fined, \$10 and costs. 7-29-18. D.
- B. O. Klapp, Fostoria. 9-27-18. Offering for sale decomposed eggs, one count. Fine, \$7.50 and costs. 9-27-18. I.

Name, City, Date Filed, Charge and Termination, Inspector.

- W. P. Holston, Jones-Warr Company, Fort Scott. 8-12-18. Selling decomposed eggs. Fine, \$25 and costs. 8-12-18. D.
- H. B. Scovell, Galena. 6-27-17. Selling substandard ice cream. Fine, \$1 and costs. 7-22-18. R.
- J. E. Raible, Galena. 6-27-17. Manufacturing adulterated ice cream. Fine, \$10 and costs. 7-22-18. R.
- Joseph F. Raible, Galena. 10-16-18. Manufacturing adulterated ice cream. Fine, \$25 and costs. 10-16-18. D.
- George Lindquist, Garfield Center. 10-16-18. Selling decomposed eggs. Fine, \$10 and costs. 10-17-18. I.
- William Parrock, Hutchinson. 9-19-18. Insanitary display of melons in violation of sanitary law. Fine, \$5 and costs. 9-19-18. I.
- A. A. Schell, Purity Ice Cream Co., Iola. 8-17-18. Manufacturing adulterated ice cream. Fine, \$25 and costs. 8-17-18. D.
- Sewell & Jackman, Independence. 7-30-18. Manufacturing adulterated ice cream. Fine, \$25 and costs. 7-30-18. D.
- A. Brinkman, Independence. 8-15-18. Selling decomposed eggs. Fine, \$25 and costs. 8-15-18. D.
- J. H. Blumenthal, Junction City. 8-9-18. Selling short-weight ice, two counts. Fine, \$85 and costs. 8-9-18. I.
- F. P. Kibbey, Junction City. 8-16-17. Manufacture and sale adulterated ice cream, three counts. Fine, \$45 and costs. 8-21-17. I.
- B. R. Miller, Luray. 1-10-18. Insanitary bakery; obstruction of entry of inspector. Fine, \$1 and costs. 8-6-18. I.
- Tom Patton, Luray. 2-26-18. Violation of nuisance law; keeping dirty yard and uncovered garbage barrel. Fine, \$80 and costs and put under \$500 peace bond. B.
- C. L. Shaw, Kansas City. 3-5-18. Sale of short-weight coal. Fine, \$50. 3-6-18. B.
- W. R. Smiley, Kansas City. 3-7-18. Sale of short-weight coal. Fine, \$50. 3-7-18. B.
- T. E. Hughes, Kansas City. 3-7-18. Sale of short-weight coal. Fine, \$50. 3-7-18. B.
- W. & O. Hollenbeck, Hollenbeck Brothers, Larkinsburg. 1-5-18. Offering for sale decomposed eggs, one count. Fine, \$10 and costs. 1-28-18. I.
- F. & G. Tourbier, Tourbier & Tourbier, Larkinsburg. 1-5-18. Offering for sale decomposed eggs, one count. Fine, \$10 and costs. 1-26-18. I.
- A. R. Kagi, Lawrence. 3-29-18. Offering for sale substandard milk. Jury found for defendant. 4-8, 10-18. R. and F.
- Emil Deuzer, Leavenworth. 8-10-17. Offering for sale milk containing filthy matter. Fine, \$15 and costs. 8-10-17. I.
- A. Ryherd, Leavenworth. 8-10-17. Offering for sale dirty cream. Went out of business and case dismissed by county attorney. I.
- Mike Enright, Leavenworth. 8-10-17. Offering for sale adulterated and dirty milk. Went out of business and case dismissed by county attorney. I.
- Theo. Pellwer, Leavenworth. 11-9-17. Insanitary conditions of grocery store. Fine, \$5 and costs. 11-12-17. D.
- W. H. Seybold, Leavenworth. 11-28-17. Insanitary bakery. Fined \$5. I.
- G. E. Barnhill and Geo. T. Martin, Barnhill & Martin, Liberal. 8-17-17. Insanitary bakery. No action by county attorney. 9-6-17. P.
- G. O. Gard, Lincoln Center. 10-17-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 10-18-18. I.
- R. D. Buck, Lone Elm. 7-24-18. Offering for sale decomposed eggs. Fine, \$5 and costs. 7-24-18. D.
- G. A. Brown, manager Manhattan Pure Milk Co., Manhattan. 7-21-17. Offering for sale filthy milk and cream. Fine, \$25, two counts. 7-21-17. I.
- C. W. St. Clair, Mildred. 7-13-18. Shipping and selling decomposed eggs. Fine, \$5 and costs. 7-13-18. D.
- C. N. Bierbusse, Oxford. 10-1-18. Offering for sale decomposed eggs. Fine, \$5 and costs. 10-1-18. F.
- F. N. Quiett, Ozawkie. 1-4-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 1-28-18. I.
- Root Brothers, Ozawkie. 1-4-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 1-28-18. I.
- S. T. Brown, Paradise. 10-18-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 10-18-18. I.
- William Hartford, Parker. 7-27-18. Offering for sale decomposed eggs. Fine, \$5 and costs. 7-27-18. D.
- George Stamas, Parsons Confectionary, Parsons. 7-6-17. Manufacturing adulterated ice cream. Fine, \$10 and costs. 7-6-17. D.
- Warrenfeldt Brothers, Parsons Creamery, Parsons. 7-6-17. Manufacturing adulterated ice cream. Fine, \$15 and costs. 7-6-17. D.
- W. S. Campbell, Parsons. 2-7-18. Offering for sale adulterated milk. Fine, \$5 and costs. 2-7-18. F. and D.
- O. M. McCulloch, Parsons. 2-7-18. Offering for sale adulterated milk. Fine, \$5 and costs. 2-7-18. F. and D.
- Charles Cockley, Peabody. 10-31-18. Insanitary bakery and confectionary. Fine, \$25 and costs. 10-31-18. I.
- Geo. Pappadaks, Star Candy Kitchen, Pittsburg. 7-23-17. Sale of adulterated ice cream. Fine, \$5 and costs. R.
- James Geuzeppa, Pittsburg. 7-23-17. Sale of adulterated ice cream. Fine, \$5 and costs. R.

(Continued in March Bulletin.)

LIFE.

If I live a life that is clean and square,
And I love my fellow man,
And I lend him a hand to help him bear
His burden whenever I can,
I need not fear what the future holds,
Nor what the reward shall be,
For the mighty love that all enfolds
Will most surely care for me.

If I speak a good word of cheer to one
Whose sorrows have borne him down,
And I give him new hope to journey on,
And change to a smile his frown,
I shall not dread when the shadows fall
And the end of life draws near,
For that wondrous love that shelters all
Will drive away my fear.

For my life is measured by what I mete,
And I earn my own reward,
So the love I give makes my heart complete,
And through it I gain the award.
For whether I dwell in a house by the road
Or far from the haunts of men,
If only my love makes bright the abode
No fear shall enter it then.

—*Author unknown.*

BULLETIN
OF THE
Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

March, 1919.

FLY BULLETIN.

**The Most Potential Anti-Fly Organization
in America.**

The Modern Children's Crusade.

By WALTER BURN, Rural Organization Specialist, Kansas State Agricultural College.

Many a town that went wild when the news came that the armistice was signed and that probably no more lives would be lost in war has managed to be quite apathetic over the fact that in its own midst the ravage of preventable disease lists its casualties every year. The boy who comes home with weak lungs, and constantly coughing because of having been in a German gas attack, attracts curious and admiring attention. But how about the boy who has "weak lungs" and who coughs constantly because of the "germ" attack from filth lying in the back yards and in the streets and alleys of the home town.

When in the early days of the war we heard rumors that enemy soldiers cut off the right hands of Belgian children, so incapacitating them for life, we were astounded at such brutality. We need to have something of the same feeling of revolt concerning the common practice of maintaining a filthy community where diseases run riot every season, weakening and incapacitating, as well as killing, little children.

We are persuaded that these conditions are of the old time, and are to be speedily remedied. Thousands of American men in training camps have been instructed in proper sanitation. They have demonstrated that cleanliness will keep men from many destroying diseases. Certainly as they take up the duties of citizens in the home community they will not be content until they secure for women and children the same immunity from filth diseases that has been enjoyed by our stalwart men.

Agitation on the subject will not in itself prove sufficient. Pamphlets on sanitation only further clutter up the yards and alleys. Public speeches in themselves never yet destroyed any filth. Probably the paper upon which is printed what I am now writing will itself add to community filth. Nothing will solve the problem but to *get out and clean up the town, and then keep it clean.*

A few years ago the boy scouts of Weir City, Kan., decided that the most chivalrous thing they could do would be to save the lives of the babies of the community. These young knights immediately set out upon their crusade. In regular squads they raked and hoed and cleaned, until from every nook and corner of the town they brought out the lurking filth which breeds disease germs. This was piled conspicuously along the curbing, and the "city dads" eventually sent wagons to haul the filth out of town and destroy it. Weir City was saved that year from

ONE OF THE MANY HEAPS GATHERED BY BOY SCOUTS.

its annual scourge of diphtheria. The young Sir Galahad had rescued the innocent babies from sure destruction. Not content with this valorous act, the boys went before the "city dads" with prepared speeches in favor of passing a model sanitation ordinance, and they won out in their determination to keep the town clean. This was the beginning of a movement which extended throughout the state. Into something more than forty towns this "children's crusade" was carried, with actual clean-up campaigns.

The experience of a town of three thousand people in eastern Kansas was not unlike that of many other towns. The proud citizens were very seriously offended when it was suggested that their town was filled with filth. The paved streets and front yards were so clean and neat that the town had the reputation of presenting a beautiful appearance. But on clean-up day the boys hauled ten wagonloads of filth out of the alleys and

THE TOWN DUMP.

back yards of two blocks of retail business houses. In a larger city in the southern part of the state, during a diphtheria epidemic, after a number of clean-up days they hauled out more than two hundred wagonloads of filth—and the boys gave up in despair.

Report of the work of the Kansas Scouts was sent to Boy Scout headquarters in New York, just as the second edition of the Scout handbook was being prepared, and resulted in giving sanitation work a permanent place in that manual. Mr. West, national secretary of the Boy Scouts of America, wrote to the leader of the Kansas movement at the time: "I have brought your work to the attention of Colonel Roosevelt, and he is immensely interested in what you are doing."

In the few years that have passed since the beginning of the movement, Kansas towns have annually cleaned up, and claim to hold the record of being uniformly cleaner than the towns of any other state in the Union. The movement spread to other states, and leaped the ocean to England, where the Boy Scouts soon followed the Kansas example and began to publish experiences of clean-up campaigns.

In conducting a clean-up campaign for a small city it is well to thoroughly plan in advance the program of work. A mass meeting at the moving-picture theater may be made the means of awakening public interest. There are several good films available showing the evils of filth as a producer of disease. By beginning early enough in advance the man who runs the picture show can secure at least one such reel. There are also a number of sets of slides available presenting this subject. The State Board of Health, the Extension Division of the Agricultural College or of the State University, all have facilities for your use in educating the public along these lines. A good lecturer may be obtained through any one of these agencies, to inspire and instruct the people in the interests of a clean community. It is well to remember the old adage of "a little nonsense now and then" and intersperse your moving-picture program with a few hundred feet of comic film.

The churches will be brought into line with the campaign, and each

minister will be glad, on the Sunday preceding clean-up day, to preach a sermon on the duty of cleanliness. Material for the preparation of such addresses may be secured from a local physician, the State Board of Health, the Antituberculosis Association, and other such agencies.

The next step will be to definitely organize the campaigns through the schools. While boys' clubs, scout patrols and other groups may work as such, yet it is desirable that every child in town should have a part in the organized clean-up campaign. A man who is adept in speaking to children, and especially to boys, may present the proposition at the schoolhouses before the various grades and in the high school. He will find it much easier to enthuse the children in the scheme if clean-up day can be some other time than Saturday, so that it may be a real holiday. He must know the program of work from beginning to end, and announce it to the children.

READY FOR WORK.

The town will have been divided into districts; the school is now divided into companies, each company assigned to a district, and officered by a competent captain.

Squads of children are organized for various types of work. There will be the groups of smaller children to gather up loose papers. Each one of these children will carry a stick with a nail driven in near one end, with which to pick up paper without touching it with his hands, and a sack in which to deposit the paper for carrying it where it is to be burned. Both boys and girls will work well at this necessary part of the task.

The boys who can bring small wagons and wheelbarrows will be allowed to volunteer. With these vehicles they will haul the collected refuse to places where large quantities will be assembled to be hauled away and destroyed.

Pitchforks and rakes will be the weapons of other brigades. All, of course, must be under the direction of adults, and these latter will

realize that it will be necessary for them also to perform a reasonable part of the work.

Interest is added to the entire campaign where the women serve a noonday meal for those who are working in the interests of a clean town. Be assured also that the boys and girls will all come from the forenoon's work ravenously hungry. Therefore the women should adopt in this case the Boy Scout motto, "Be prepared."

It will be the duty of the town council, where that august body exists, to have the refuse hauled out of town, and this should be done on the afternoon of clean-up day. Enough teams and wagons should be engaged in this work to complete the job before night.

Care must be exercised to thoroughly do away with whatever part of the refuse will not burn. It must not be allowed to remain as a blot to the rural landscape. A very good plan is to throw the refuse into a ravine, and then with a few teams and scrapers cover it to a fair depth with earth.

The crowning event of the day is the evening program of fun for the children. Looking forward to this, the boys and girls should be dismissed from their work at four o'clock in the afternoon, so that they may have a few hours of rest.

If the weather permits, the evening festivities may be out of doors. It is probable that a considerable portion of the refuse collected is inflammable—and perhaps merchants will also be willing to show their gratitude by leaving a lot of boxes convenient of access—and one feature of the evening fun may be a huge bonfire. An Indian dance will readily occur to the boys as being the proper stunt while the fire is burning. If there is in the community an organization of Camp Fire Girls, the presentation of some of their ritual work will be timely and interesting. The "weinie roast" may be an added feature in which all will be glad to take part. It may be that a returned soldier can be induced to tell stories of adventure. Better yet, a noted hunter may be secured to tell wild

animal stories. The evening will close with a community sing, and a few words spoken by a local leader, thanking the boys and girls for their service to the community.

Every town in the United States should have a clean-up day this spring. Let's make it unanimous!

WICHITA OBSERVER

Our Ancient Enemy—The Fly.

"House flies have taken their place in the general evolution of living matter," says Dr. Edward H. Ross, one-time Health Officer of Port Said, the Suez Canal district and Cairo.

It is well known that many fossils of the house fly appear in the tertiary rocks, and even in an earlier strata, known as Devonian; and everyone is familiar with the remains of flies found in fossil resins known as amber. Every Sunday-school scholar knows the history of the plagues of Egypt which numbered flies among the calamities. Three thousand

years later. history repeated itself when the fly plague visited Cairo in 1906.

On the most ancient Egyptian engravings, slaves are shown holding palm leaves, which were used for fans and "fly-flappers"—we now call them "swats." It is a matter of history that the ancient Romans were much annoyed by flies, and that a nobleman invented the bed curtain as a substitute for the "fly-flapper," as the flapping slave was wont to take his siesta while the master was indulging in his.

The Mosaic laws and the laws enunciated in the Koran aim directly at sanitation, which, if they had been observed, would have prevented many of the fly-borne diseases; for fly-reduction is merely a question of efficient sanitation.

In 1658 Kircher propounded and published in Rome that flies played an important role in the transmission of disease, which, viewed in the light of our present-day knowledge, shows him to have been a close observer with a clear knowledge of supposed facts, which in recent years have been scientifically demonstrated as such. He said: "There can be no doubt that flies feed on the internal secretions of the diseased and dying, then flying away, they deposit their excretions on the food in neighboring dwellings, and persons who eat it are thus infected."

Even earlier than this a celebrated Italian physician, Mercurialis, who lived from 1530 to 1607, advanced a similar theory, although the scientists and physicians of his day gave his theory scant credence, "and thus," said someone, "the centuries went by before this momentous fact was re-discovered, and again stated in terms to arouse the attention and interest of the civilized world."

Verily, "there is nothing new under the sun!"

Professor Wm. A. Riley, in a recent article in *Science*, said: "What the present status of preventive medicine might have had Kircher's dictum been accepted is, of course, entirely speculative, but it is reasonable to suppose that preventive medicine would have been placed on a sure foundation a century before it was, and that the problem of fly extermination, which is now engaging the attention of the world, would have been solved and its history now have been but a memory. And who dare reckon the lives that would have been saved and the treasure that has been wasted during all the years from Kircher's time until now.

The Fly.

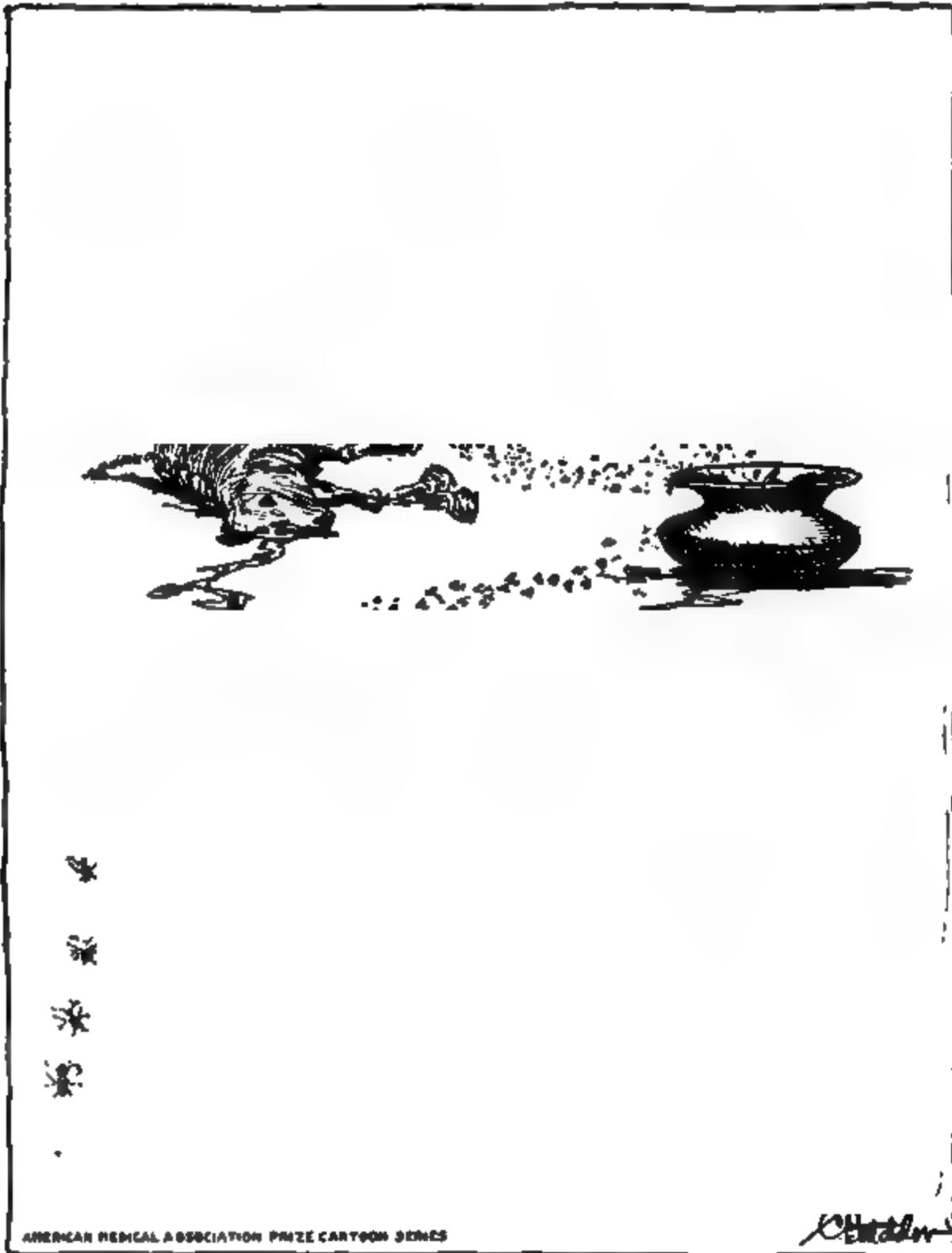
The house fly exists only through the toleration of men—a toleration which, were it not ignorant, would be criminal.

The house fly is the most terrible single enemy that mankind has among living creatures. Beasts of the jungle have slain their thousands, but this prowler in the household has slain his tens of thousands. Of all vermin he is the most filthy; of all purveyors of disease the most deadly.

The house fly is born in offal—nowhere else. And his life is in keeping with his birth. He lives, to the day of his death, in filth. The manure pile, the cuspidor and the cesspool are his home. It is from those haunts

that he comes to visit the kitchen, the dining room and the nursery. He drags his filthy feet across the bread, dips them in the butter, wipes them on the meat and bathes in the milk. He seeks out the sick room of the consumptive, the typhoid fever patient and the child with summer complaint. Then he flies to the kitchen and deposits the poison on the rim of the milk bottle, and to the nursery, where he lights on baby's lips.

Don't mind a rattlesnake or two about the house, but kill every house fly as you value your life and the lives of your children. Don't buy your



AMERICAN MEDICAL ASSOCIATION PRIZE CARTOON SERIES

SEVERAL REASONS WHY FLIES SHOULD BE
UNWELCOME GUESTS.

groceries or your milk or bread or fruit of any dealer who is not as particular as yourself. There would be little typhoid fever without the house fly, and little chance of cholera infantum. And there can be no flies where there is no filth. Keep your kitchen, cellar and yard clean; let no refuse accumulate. Put lime about the stable and keep the garbage pail tightly covered; use fly traps, sticky paper and the wire paddle until the house is clear.

Six Strategical Moves to Use in Your Campaign Against the Fly.

Here are six strategical moves to be used in your campaign to exterminate the fly. It is the plan of battle used and recommended by Dr. Jean Dawson, famous fly fighter and chief of the Health Division's Bureau of Fly Prevention:

1. Get after the breeding places early. See that your backyard is free from filth and that manure is hauled away weekly from stables that may be in your neighborhood.
 2. Keep the fly out of your kitchen. The female cannot lay her eggs until after she has had a full meal of rich foods, such as butter, cream and sweet stuffs.
 3. Keep the fly away from baby. Thousands of germs cling to the feet and sucker of a fly. A fly leaves a trail of these on the skin of any person it touches.
 4. Keep your garbage can tightly covered. The fly feeds and breeds in the refuse such cans contain.
 5. Place traps in your yard some distance from the house. Then you can trap the pests before they have a chance to get into your home.
 6. Keep tab on your grocery and meat market. If there are flies buzzing about you may rest assured the store is not clean. By keeping the store and its surroundings spotless and by using traps the proprietor can practically eliminate flies. If he doesn't, take your trade to one who does.
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Insect Pests.

Some of the most serious diseases of man are caused or transmitted by insects. Even if that were not true, the discomfort and the physical and mental irritation caused by some of these insect pests would be an ample reason for issuing this leaflet.



Plague is spread almost exclusively by fleas. There seems to be a fairly good case against the cockroach as a carrier of infection of several kinds. Malarial fevers and yellow fever are mosquito-borne. Leprosy, typhoid fever and some of the skin diseases are thought to be sometimes spread by bedbugs. Typhus fever is found only where the louse is present as a transmitter of infection.

HIS DEATH OR YOURS!

FLEAS.

Fleas are more likely to be troublesome where rats and dogs are members of the household. They do not breed upon these animals, but in dust, particularly in the dust of cracks and crevices. Cleanliness is essential to their removal, and the sweepings should be burned so that their eggs may be destroyed.

The application of kerosene is an efficient remedy; so is gasoline, but see "Gasoline" for precautions. Rooms may be thoroughly cleared of these pests by means of sulphur fumigation.

It is said that fleas may be destroyed with certainty by sprinkling about five pounds of naphthalene over a floor of ordinary size and closing the room and leaving it closed twenty-four hours. Then sweep up and transfer the naphthalene to another room.

COCKROACHES.

Cleanliness is an important detail in ridding a house of these insects. Powdered borax persistently used is pretty sure to clean them out. Sodium fluoride, a dry, white powder costing but little, is an efficient roach exterminator, so it is claimed. It should be blown or dusted in thin layers all over the floor, into cupboards, into every crack and crevice in pantries or other places infested by them.

MOSQUITOES.

The nuisance caused by the common mosquito might be abated in many places. Stagnant water serving as places for their breeding should not be allowed to remain when it can be removed. Very small quantities of water may serve as hatching places, such as cesspools, watering troughs, watering pans in chicken yards, ornamental ponds, water pitchers in guest rooms, vases, and, on the dump heap, tin cans, bottles and any old tin or iron vessels or other articles which may hold small quantities of water. They may even breed in the tracks left by domestic animals in clayey soil. A neglected rain barrel may serve as a breeding place for hundreds of thousands in a single season. Water dipped from a catch basin contained at the rate of 3,000 wigglers to a gallon.

Mosquitoes can be kept from breeding by the application of kerosene to the surface of rain barrels, puddles of water, small ponds, or swampy places, applying it at the rate of one ounce (two or three tablespoonfuls), of kerosene to fifteen square feet of water surface. It should be renewed once a week. When practicable, wet or swampy land near homes should be drained. The two efficient remedies for the mosquito nuisance are drainage and kerosene, or thin, crude petroleum. In a village, or in a group of summer cottages, there should be a coöperation of all the householders.

BEDBUGS.

Various poisons destroy them when they can be applied to them, but the application is often the difficulty. They are active at night, but with the return of day they are in hiding in cracks and crevices of furniture, walls, and floors. Benzine and gasoline are efficient, but dangerous unless used very carefully. Kerosene is destructive to the mature insects and their eggs. A room may be freed of them by sulphur fumigation.

CLOTHES MOTHS.

The best methods of guarding against the depredations of these insects is early in the spring, to put furs and other winter clothing into large canvas bags which are kept for that special purpose. The top of the bag should be tied, and then the gathered top should be folded downward and

tied again tightly. The bags should be kept hanging in the attic or other available places.

Woolen clothing and other articles may be saved from clothes moths by placing them in a clean, tight barrel early in the spring. Upon the top of the articles keep a saucer, into which pour several times during the season a small quantity, about one ounce, of carbon bisulphide, meanwhile keeping the barrel closely covered, first, with a large sheet of brown paper, and then with a tightly fitting board cover. Naphthalene may be used as a repellent.

SULPHUR FUMIGATION.

The thorough fumigation of rooms with the fumes of sulphur is an efficient way of destroying all insect life, but is not a good disinfectant. To fumigate a room, put two pounds of roll brimstone or the flowers of sulphur for each one thousand cubic feet of room space into an iron pot or kettle. For safety put the kettle containing the sulphur into a tub or large pan containing a few inches of water, the kettle resting in the tub on bricks. Close tightly all openings from the room. Put a shovelful of live coals on the sulphur, or better, pour three or four ounces of alcohol or denatured alcohol upon the sulphur and light with a match. Leave the room quickly and keep it closed four or five hours.

The disadvantages in the use of sulphur fumigation are that it discolors and corrodes metals and bleaches and sometimes seriously injures colored fabrics, wall paper, or other articles.

FORMALDEHYDE FUMIGATION.

Formaldehyde gas is a good disinfectant, but is entirely useless for the destruction of insects.

CYANIDE FUMIGATION.

This is still more rapidly destructive of insect life, and it does not injure articles, but it is much more costly and the hydrocyanic acid gas evolved is so rapidly acting and so deadly a poison that it should be used by experts only.

CARBON BISULPHIDE.

Carbon bisulphide is a rapidly acting insecticide, but it is a very poisonous gas if inhaled and is dangerously explosive if used in a room where there are lights or a speck of fire. Poured from a bottle it rapidly volatilizes into gas which passes downward through the meshes of fabrics above which it is liberated.

GASOLINE AND BENZINE.

They are altogether too inflammable and explosive to be used in a house, in any room or part of which there is a light or a fire.

A Harmless Fly Poison.

Despite all our efforts and well-screened houses a few flies will get into our homes. These demand immediate attention of a strong, sure hand, armed with a swatter, or by the use of an attractive drink of some substance that will deal as effectively with the uninvited pest as that of the swatter.

A solution of sodium salicylate sweetened with a pinch of brown sugar will be the lure for the average house fly's destruction. Dissolve one and a half teaspoonfuls of salicylate of sodium in a half pint of water, adding a little brown sugar; partially fill a tumbler with the solution. Place a piece of blotting paper over the top, the size of a saucer, and on

top of the blotting paper place a saucer. The whole is then quickly inverted, a toothpick placed under the edge of the glass, and the container is ready for use. As the solution dries out of the saucer, the liquid seal at the edge of the glass is broken and more liquid flows into the saucer, thus the blotting paper is always kept moist.

This fly poison has the advantage of being harmless to human beings while being poisonous to flies, and is therefore recommended as a safe and effective way to rid a place of flies.

Prosecutions.

JULY 1, 1917, TO JANUARY 1, 1919.

Continued from February Bulletin.

Name, City, Date Filed, Charge and Termination, Inspector.

- J. U. Oatudal, Plainville Pharmacy, Plainville. 12-5-17. Manufacturing adulterated ice cream. Fine, \$5 and costs. I.
- John Anderson, Plainville. 12-5-17. False-scale balance; offering for sale packages of sugar which were less than quantity represented; foods on display uncovered. Fine, \$10. I.
- Geo. Dixon, Rantoul. 10-18-17. Insanitary outdoor toilet rear of barber shop. Fine, \$5 and costs. 10-18-17. D.
- Springer & Day, Rantoul. 10-18-17. Insanitary outdoor toilet in rear of general store. Fine, \$5 and costs. 10-18-17. D.
- J. H. Brewer, Rantoul. 10-18-17. Insanitary toilet in rear of Rantoul hotel. Fine, \$5 and costs. 10-18-17. D.
- Anton Smetana and Moody Hancock, Russell, 8-21-17. Selling short-weight ice. Fine, \$10 and costs. 8-21-17. B.
- Chris Kraft, Stull. 7-28-17. Offering for sale decomposed eggs. Fine, \$10 and costs. 7-31-17. T.
- John Stilli, Topeka. 6-25-17. Violation sanitary inspection law; dirty grocery. Fine, \$1 and costs. 7-8-17. T.
- T. V. Campbell, Topeka. 4-1-18. Sale adulterated and misbranded tincture of iodine. Costs and fine of \$5. F.
- Grover Bradshaw, manager Farmers' Union, Waldo. 10-18-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 10-18-18. I.
- Wellington Creamery Co. (Peterson, manager), Wellington. 10-8-17. Selling adulterated ice cream. Fine, \$5 and costs. R.
- William Pappas, Wellington. 10-1-18. Selling adulterated ice cream. Fine, \$5 and costs. 10-1-18. F.
- George Forgeson, Forgeson Brothers, White City. 10-22-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 10-22-18. I.
- Harry Peterson, Winkler. 9-6-18. Offering for sale decomposed eggs. Fine, \$10 and costs. 9-6-18. I.
- J. C. Taylor, Wichita. 4-12-18. Offering for sale cream that was substandard. Fine, \$10 and costs. I.
- G. G. Overstreet, Wichita. 4-11-18. Insanitary bakery; uncovered supplies. Fine, \$25 and costs. 4-11-18. I.
- Fanzie Ablah, Ablah Mercantile Co., Wichita. 4-5-18. Insanitary grocery; uncovered goods. Fine, \$25 and costs. 4-10-18. I.
- R. F. Mally, Coronado Hotel Cafe, Wichita. 5-7-18. Selling adulterated cream. Fine, \$10 and costs. 5-14-18. I.
- Wm. McOarty, Waldorf Cafe, Wichita. 5-7-18. Selling adulterated cream. Fine, \$25 and costs. 5-14-18. I.
- H. Magill (Kitchenette), Wichita. 5-17-18. Selling adulterated cream; insanitary kitchen, refrigerator, etc. Fine, \$10 and costs. 5-14-18. I.
- R. R. Poole, Good Eats, Wichita. 5-7-18. Selling adulterated cream. Fine, \$10 and cost. 5-14-18. I.

The House Flies.

See the city with its flies;
Deadly flies!
What a world of sickness and of death
The word implies!
How they're swarming, swarming, swarming,
In the summer's balmy air;
Every residence they're storming,
On the edibles they're forming,
And they leave death's message there!
With their specks, specks, specks,
Typhoid germs, consumption flecks
And other dread diseases which most frequently
arise
From the flies, flies, flies, flies,
Flies, flies, flies—
From the filthy visitation of the flies.

—*Pensacola Journal.*

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

April, 1919.

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Let's go!

"Hygiene can prevent more crime than any law."—*Hugo Munsterberg.*

"A state which will not prevent what can be foreseen is open to indictment."—*Munsterberg.*

"The preservation of national vigor should be a matter of patriotism."—*President Roosevelt.*

"There is a budget which we pay with frightful regularity: it is that of unnecessary disease and premature death."—*Irving Fisher.*

"Health is the essential factor in productiveness, prosperity, and happiness, and hence in the advancement of civilization."—*Sir Frederick Treves.*

Are you going to attend the annual school for health officers, at Rosedale, May 12 to 17?

Welcome: The new Bureau of Public Health Nursing in the Division of Communicable Disease.

The malady for which there is no cure—old age.

The food substitutes "that are just as good" are rarely "as good" and never "just."

All dealers are required to candle eggs before purchase, between the dates of May 1 and January 1.

MORBIDITY REPORT FOR FEBRUARY, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Polomyelitis (epidemic).	Influenza.	Other Diseases (see Addenda).
THE STATE	7	188	89	219	116	3	20	84	135	264	7	0	10,274	214
Allen, except.	0	2	1	0	0	0	6	1	0	3	0	0	60	0
Iola	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	0	0	0	0	0	5	0	0	0	0	51	1
Atchison, except.	0	10	0	0	0	0	0	0	0	0	0	0	39	0
Atchison city	0	28	2	3	1	0	0	1	0	0	0	0	64	0
Barber	1	1	0	0	0	0	0	0	1	0	0	0	42	0
Barton, except.	0	2	1	4	0	0	0	0	0	7	0	0	47	0
Great Bend	0	1	1	1	0	0	2	0	0	2	0	0	24	0
Bourbon, except.	0	0	0	0	0	0	0	1	0	1	0	0	20	3
Fort Scott	0	0	1	0	0	0	0	3	0	0	0	0	0	10
Brown	0	5	0	4	6	0	0	0	1	1	0	0	158	2
Butler, except.	0	10	5	3	5	0	0	5	1	12	0	0	152	1
Augusta	0	6	1	1	2	0	0	2	2	7	0	0	9	2
Eldorado	1	2	0	5	1	0	0	1	1	12	0	0	29	2
Chase	0	0	0	3	0	0	0	12	0	1	0	0	76	0
Chautauqua	0	0	0	1	0	0	0	1	0	0	0	0	3	0
Cherokee, except.	0	0	1	4	0	0	0	0	0	5	0	0	41	6
Galena	0	2	0	0	0	0	0	0	0	0	0	0	4	0
Cheyenne	0	0	0	0	0	0	0	0	0	0	0	0	21	0
Clark	0	0	0	0	5	0	0	0	8	1	0	0	26	0
Clay	0	5	0	9	4	0	0	0	0	0	0	0	48	0
Cloud, except.	0	0	0	1	0	0	0	0	0	0	0	0	141	0
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	181	1
Coffey	0	0	1	1	0	0	0	0	0	1	0	0	15	0
Comanche	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Cowley, except.	0	0	0	0	4	0	0	0	0	1	0	0	156	0
Arkansas City	0	0	0	2	1	0	0	1	2	3	0	0	319	1
Winfield	0	0	0	0	5	0	0	11	1	0	0	0	29	2
Crawford, except.	0	1	1	17	0	0	2	0	1	20	0	0	230	1
Pittsburg	0	3	0	1	0	0	0	4	1	1	0	0	26	15
Decatur	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Dickinson	0	0	1	6	0	0	0	0	1	3	0	0	22	0
Doniphan	0	3	0	2	0	0	0	0	0	3	1	0	88	2
Douglas, except.	0	0	0	1	4	0	0	0	1	0	0	0	67	0
Lawrence	0	0	0	0	11	0	0	0	1	0	0	0	6	11
Edwards	0	0	0	0	0	0	0	0	0	0	0	0	21	0
Elk	0	0	0	3	1	0	0	0	0	7	0	0	56	0
Ellis	1	0	0	0	0	0	0	0	3	0	0	0	17	0
Ellsworth	0	0	0	0	0	0	0	0	0	1	0	0	39	0
Finney	0	0	0	0	0	0	0	0	0	0	0	0	157	0
Ford, except.	0	0	1	0	0	0	1	5	7	7	0	0	243	0
Dodge City	0	0	1	0	0	0	0	0	1	10	0	0	93	5
Franklin, except.	0	0	2	1	2	0	0	0	0	0	0	0	11	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Geary, except.	0	2	0	0	0	0	0	0	0	0	0	0	3	0
Junction City	0	0	1	16	0	0	0	0	2	3	0	0	17	1
Gove*	0	0	0	0	0	0	0	0	0	1	0	0	10	0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Grant*	0	4	0	1	1	0	0	0	0	0	0	0	0	0
Gray	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	215	1
Greenwood	0	11	0	14	0	2	0	0	7	10	0	0	3	0
Hamilton	0	0	0	0	1	0	0	0	0	1	0	0	33	0
Harper	0	0	0	0	0	0	4	0	2	0	0	0	17	0
Harvey, except.	0	0	0	5	0	0	2	0	0	0	0	0	4	0
Newton	0	0	0	3	1	0	0	1	0	0	1	0	15	0
Haskell	0	0	0	1	0	0	0	0	1	0	0	0	15	0
Hodgeman*	0	0	0	0	0	0	0	0	2	0	0	0	71	0
Jackson	0	0	1	3	0	0	0	3	2	0	0	0	170	0
Jefferson	0	1	0	4	1	0	0	0	1	0	0	0	66	0
Jewell	0	0	0	4	0	0	0	0	0	1	0	0	10	0
Johnson	0	0	0	0	0	0	0	0	0	3	0	0	14	0
Kearny	0	0	0	0	0	0	0	0	0	5	0	0	217	1
Kingman	0	5	0	0	21	0	0	0	0	0	0	0	69	1
Kiowa	0	0	0	7	7	0	0	0	0	0	0	0	82	9
Labette, except.	0	1	0	0	0	0	0	3	8	0	0	0	13	6
Parsons	0	3	0	0	0	0	0	0	0	0	0	0	18	0
Lane	0	0	0	0	0	0	0	0	0	0	0	0	8	1
Leavenworth, except.	0	6	3	0	0	0	0	0	0	0	0	0	13	1
Leavenworth city	0	3	8	1	0	0	0	0	0	2	0	0	13	15

MORBIDITY REPORT FOR FEBRUARY, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Polio-myelitis (epidemic)	Influenza	Other Diseases (see Addenda)
Lincoln	0	0	0	0	0	0	0	0	1	6	0	0	123	1
Linn	1	0	0	0	1	0	0	0	0	0	0	0	268	0
Logan	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia	0	1	0	0	0	0	0	0	0	0	0	0	27	0
Marion	0	0	0	0	0	0	0	0	2	1	0	0	9	2
Marshall	0	4	4	0	0	0	0	1	2	4	0	0	258	2
McPherson	0	0	0	10	0	0	0	0	2	0	0	0	230	1
Meade	0	0	0	0	0	0	0	1	2	0	0	0	14	0
Miami	0	12	0	0	0	0	0	0	2	0	0	0	16	0
Mitchell	0	0	0	0	0	0	0	0	0	1	0	0	13	0
Montgomery, except Coffeyville	0	0	0	2	0	0	0	1	1	1	0	0	349	0
Independence	0	0	0	1	0	0	0	0	0	2	0	0	164	4
Morris	0	0	1	1	0	0	0	0	0	4	0	0	21	0
Morton	0	0	0	0	0	0	0	0	0	0	0	0	171	0
Nemaha	1	0	0	8	0	0	0	0	0	0	0	0	59	0
Neosho, except Chanute	0	8	1	0	1	0	0	0	2	0	0	0	1	0
Ness	0	24	0	1	1	0	0	0	0	0	0	0	121	0
Norton	0	0	0	0	0	0	0	0	0	0	0	0	37	0
Osage	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Osborne	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	1	1	0	0	16	0
Pawnee	0	1	0	0	0	0	0	0	0	0	0	0	70	0
Phillips	0	0	0	0	0	0	0	0	1	0	0	0	46	0
Pottawatomie	0	0	0	0	0	0	0	0	0	6	0	0	28	1
Pratt	0	0	0	3	0	0	0	0	3	0	0	0	199	0
Rawlins	0	0	0	0	0	0	0	0	0	0	0	0	133	0
Reno, except Hutchinson	0	0	0	0	0	0	0	0	0	0	0	0	29	0
Republic	0	0	0	0	0	0	0	0	0	0	0	0	57	0
Rice	0	1	4	0	11	0	0	6	2	2	0	0	10	0
Riley, except Manhattan	0	2	0	3	0	0	0	1	1	1	0	0	107	5
Rooks	0	0	1	0	3	0	0	0	1	0	0	0	534	0
Ruah	0	0	0	0	0	0	0	0	1	0	0	0	39	0
Russell	0	0	0	0	0	0	0	0	1	0	0	0	328	2
Saline, except Salina	0	0	0	0	1	0	0	0	0	4	0	0	20	0
Scott	0	0	7(a)	14	0	0	0	0	18	4	0	0	42	10
Sedgwick, except Wichita	0	0	0	0	0	0	0	0	0	0	0	0	5	1
Seward	0	0	0	0	4	0	0	0	0	1	0	0	200	0
Shawnee, except Topeka	0	0	0	12	0	0	0	0	1	0	0	0	8	0
Sheridan	0	4	0	1	0	0	0	0	13	0	0	0	42	0
Sherman	0	1	0	0	0	0	0	0	5	2	0	0	15	3
Smith	0	1	0	0	0	0	0	0	0	0	0	0	27	0
Stafford	1	1	0	3	0	0	0	0	0	0	0	0	50	0
Stanton	0	0	1	7	5	0	0	2	3	0	0	0	609	34
Stevens	0	0	1	0	0	0	0	0	0	0	0	0	24	0
Sumner, except Wellington	0	0	0	0	0	0	0	0	0	1	0	0	35	0
Thomas	0	0	0	2	0	0	2	2	1	0	0	0	619	6
Trego	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Wabaunsee	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Wallace	0	0	2	0	0	0	0	0	1	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	1	0	0	0	90	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Wilson	0	0	1	2	0	0	0	0	1	0	0	0	91	2
Woodson	0	0	0	4	2	0	0	0	1	3	0	0	11	0
Wyandotte, except Kansas City	0	1	1	0	0	0	0	0	0	0	0	0	18	0
Rosedale	0	6	19	3	2	0	1	8	2	53	1	0	236	39
	0	0	0	0	0	0	0	0	0	0	0	0	0	1

ADDENDA.

(a) Carriers—5. (b) Carriers—3. * No report.
 Other Communicable Diseases: Cancer, 13; Chancre, 3; Erysipelas, 6; Gonococcus Infection, 144;
 Meningitis (Influenzal), 4; Syphilis, 42; Trachoma, 2.

MORBIDITY REPORT FOR MARCH, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid...	Smallpox.....	Diphtheria.....	Scarlet Fever....	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenpox.....	Mumps.....	Pneumonia (acute lobar)...	Meningitis (epidemic).....	Polioarthritis (epidemic).....	Influenza.....	Other Diseases (see Addenda)...
THE STATE.....	9	376	103	281	229	8	14	95	262	310	8	0	13,859	263
Allen, except.....	0	4	1	0	0	0	0	0	0	1	0	0	29	0
Iola.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson.....	0	0	0	1	0	0	0	1	1	0	0	0	39	0
Atchison, except.....	0	10	0	3	0	0	0	1	1	7	0	0	131	0
Atchison city.....	1	56	3	15	1	0	0	0	0	0	0	0	31	0
Barber.....	0	8	0	1	0	0	0	0	4	0	0	0	59	2
Barton, except.....	0	7	1	0	1	0	0	0	2	11	0	0	122	0
Great Bend.....	0	0	0	0	0	0	0	0	3	0	0	0	19	0
Bourbon, except.....	0	0	1	1	0	0	0	0	0	3	0	0	56	0
Fort Scott.....	0	0	1	1	3	0	0	0	0	1	0	0	0	7
Brown.....	0	5	0	1	0	0	0	0	0	0	0	0	204	0
Butler, except.....	2	0	0	2	0	1	0	1	3	12	0	0	62	1
Augusta.....	0	2	0	0	1	0	0	0	4	4	0	0	6	2
Eldorado.....	2	2	0	2	0	0	0	11	4	10	0	0	27	1
Chase.....	0	0	0	0	1	0	0	7	0	0	0	0	22	1
Chautauqua.....	0	0	0	1	2	0	0	0	0	0	0	0	3	0
Cherokee, except.....	0	1	1	4	0	0	0	0	0	3	0	0	39	1
Galena.....	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cheyenne.....	0	0	0	4	1	0	0	0	28	1	0	0	81	0
Clark.....	1	0	0	7	15	1	1	0	0	8	0	0	93	0
Clay.....	0	0	1	0	2	0	0	0	0	0	0	0	63	0
Cloud, except.....	1	0	0	0	1	0	0	0	0	0	0	0	189	0
Concordia.....	0	0	0	0	1	0	0	0	0	0	0	0	57	8
Coffey.....	0	0	0	1	0	0	0	0	0	2	0	0	93	0
Comanche.....	0	0	0	0	1	0	0	0	0	1	0	0	115	0
Cowley, except.....	0	0	0	0	0	0	0	0	7	0	0	0	139	1
Arkansas City.....	0	0	0	0	0	0	0	0	1	2	0	0	59	1
Winfield.....	0	0	0	0	16	0	0	4	2	0	0	0	106	8
Crawford, except.....	0	1	1	20	0	0	0	2	5	22	0	0	316	2
Pittsburg.....	0	1	0	1	1	0	2	2	1	4	0	0	83	4
Decatur.....	0	0	0	8	0	0	0	0	0	0	0	0	39	0
Dickinson.....	0	1	0	1	0	0	0	0	6	13	0	0	198	1
Doniphan.....	0	6	0	2	1	0	0	0	1	0	0	0	21	0
Douglas, except.....	0	0	0	5	0	0	0	0	6	2	0	0	123	0
Lawrence.....	0	0	0	0	1	0	0	0	6	1	0	0	9	11
Edwards.....	0	0	0	0	0	0	0	0	0	0	0	0	179	0
Elk.....	0	0	0	0	0	0	0	0	0	2	0	0	19	0
Ellis.....	0	0	0	0	0	0	0	0	4	4	0	0	46	1
Ellsworth.....	0	0	0	7	0	0	0	0	0	1	0	0	86	0
Finney.....	0	3	0	1	6	0	0	0	2	5	0	0	18	0
Ford, except.....	0	0	0	0	2	0	0	0	1	3	0	0	470	0
Dodge City.....	0	0	0	0	9	1	0	3	1	0	0	0	47	0
Franklin, except.....	0	0	0	0	0	0	0	0	0	0	0	0	17	0
Ottawa.....	0	0	0	0	0	0	0	0	0	4	0	0	21	0
Geary, except.....	0	0	2	1	0	0	0	0	0	2	0	0	10	0
Junction City.....	0	0	2	8	0	1	0	0	4	4	0	0	12	2
Gove.....	0	0	0	0	0	0	0	0	0	0	0	0	70	0
Graham.....	0	1	0	0	0	0	0	0	0	1	0	0	7	0
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Gray.....	0	0	0	0	5	0	0	0	0	1	0	0	260	0
Greeley*.....	0	3	0	30	0	0	1	10	32	7	1	0	104	0
Greenwood.....	0	0	0	0	0	0	0	0	3	3	0	0	109	0
Hamilton.....	0	0	0	0	1	0	0	0	4	2	0	0	72	0
Harper.....	0	0	0	0	0	0	0	0	0	0	0	0	27	0
Harvey, except.....	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Newton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	123	0
Hodgeman.....	0	0	0	0	0	0	0	0	0	0	0	0	47	1
Jackson.....	0	0	1	1	0	0	0	0	1	0	1	0	147	1
Jefferson.....	0	1	0	2	0	0	0	3	2	5	0	0	130	0
Jewell.....	0	0	0	1	1	0	0	0	3	0	0	0	23	0
Johnson.....	0	3	0	0	6	0	0	0	0	0	0	0	89	0
Kearny.....	0	0	0	4	4	0	0	1	1	5	0	0	436	1
Kingman.....	0	7	3	4	4	0	0	0	4	1	0	0	473	1
Kiowa.....	0	0	0	3	5	0	0	0	2	0	0	0	55	3
Labette, except.....	0	0	0	4	26	0	0	2	2	0	0	0	46	7
Parsons.....	0	7	1	1	1	0	0	4	2	1	0	0	76	0
Lane.....	0	1	0	0	0	0	0	0	0	0	0	0	45	0
Leavenworth, except.....	0	12	3	9	1	0	0	1	2	0	0	0	28	0
Leavenworth city.....	0	0	26	2	0	0	0	1	1	2	1	0	0	20

MORBIDITY REPORT FOR MARCH, 1919—Concluded.

COUNTIES AND CITIES.	Other Diseases (see Addenda)	Influenza	Poliomyelitis (epidemic)	Meningitis (epidemic)	Pneumonia (acute lobar)	Measles	Chickenpox	Whooping Cough	German Measles (rubella)	Meas (in Scar)	Diphtheria	Scarlatina	Typhoid and Paratyphoid
Lincoln	1	358	0	0	1	1	0	0	0		0	0	0
Linn	0	214	0	0	0	0	0	0	0		0	0	0
Logan	0	12	0	0	0	0	0	0	0		0	0	0
Lyon, except Emporia	0	28	0	0	0	0	0	0	0		0	0	0
Marion	0	12	0	0	0	0	0	0	0		0	0	0
Marshall	0	304	0	2	0	0	0	0	0		0	0	0
McPherson	0	104	0	1	0	0	0	0	0		0	0	0
Meade	0	101	0	0	0	0	0	0	0		0	0	0
Miami	0	145	0	0	2	0	0	0	0		0	0	0
Mitchell	0	23	0	0	0	0	0	0	0		0	0	0
Montgomery, except Colleyville	0	107	0	0	0	0	0	0	0		0	0	0
Independence	0	78	0	1	7	0	0	0	0		0	0	0
Morris	0	98	0	0	1	0	0	0	0		0	0	0
Morton	0	50	0	0	12	0	0	0	0		0	0	0
Nemaha	0	199	0	0	0	0	0	0	0		0	0	0
Neosho, except Chanute	0	30	0	0	0	0	0	0	0		0	0	0
Ness	0	42	0	0	0	0	0	0	0		0	0	0
Norton	0	75	0	0	0	0	0	0	0		0	0	0
Osage	0	3	0	0	0	0	0	0	0		0	0	0
Osborne	0	1	0	0	1	0	0	0	0		0	0	0
Ottawa	0	82	0	0	0	0	0	0	0		0	0	0
Pawnee	0	219	0	0	0	0	0	0	0		0	0	0
Phillips	0	123	0	0	0	0	0	0	0		0	0	0
Pottawatomie	0	407	0	0	0	0	0	0	0		0	0	0
Pratt	0	78	0	0	2	0	0	0	0		0	0	0
Rawlins	0	60	0	0	0	0	0	0	0		0	0	0
Reno, except Hutchinson	0	148	0	0	1	0	0	0	0		0	0	0
Republic	0	106	0	0	4	0	0	0	0		0	0	0
Rice	0	156	0	0	1	0	0	0	0		0	0	0
Riley, except Manhattan	0	169	0	0	0	0	0	0	0		0	0	0
Rooks	0	216	0	0	1	0	0	0	0		0	0	0
Rush	0	183	0	0	8	0	0	0	0		0	0	0
Russell	0	76	0	0	1	0	0	0	0		0	0	0
Saline, except Salina	0	69	0	0	6	0	0	0	0		0	0	0
Sedgwick, except Wichita	0	188	0	0	0	0	0	0	0		0	0	0
Seward	0	146	0	0	2	0	0	0	0		0	0	0
Shawnee, except Topeka	0	136	0	0	0	0	0	0	0		0	0	0
Sheridan	0	28	0	0	0	0	0	0	0		0	0	0
Sherman	0	112	0	0	0	0	0	0	0		0	0	0
Smith	0	13	0	0	0	0	0	0	0		0	0	0
Stafford	0	22	0	0	0	0	0	0	0		0	0	0
Stanton	0	415	0	0	0	0	0	0	0		0	0	0
Stevens	0	49	0	0	0	0	0	0	0		0	0	0
Sumner, except Wellington	0	81	0	0	1	0	0	0	0		0	0	0
Thomas	0	639	0	0	1	0	0	0	0		0	0	0
Trego	0	19	0	0	0	0	0	0	0		0	0	0
Wabaunsee	0	30	0	0	5	0	0	0	0		0	0	0
Wallace	0	120	0	0	0	0	0	0	0		0	0	0
Washington	0	236	0	0	1	0	0	0	0		0	0	0
Wichita	0	28	0	0	0	0	0	0	0		0	0	0
Wilson	0	419	0	0	7	0	0	0	0		0	0	0
Woodson	0	17	0	0	0	0	0	0	0		0	0	0
Wyandotte, except Kansas City	0	54	0	0	0	0	0	0	0		0	0	0
Rosedale	0	7	0	0	0	0	0	0	0		0	0	0
	0	146	0	0	0	0	0	0	0		0	0	0
	0	7	0	0	0	0	0	0	0		0	0	0
	0	23	0	0	0	0	0	0	0		0	0	0
	0	19	0	0	0	0	0	0	0		0	0	0
	0	276	0	0	3	0	0	0	0		0	0	0
	0	10	0	0	4	0	0	0	0		0	0	0
	0	25	0	0	3	0	0	0	0		0	0	0
	0	184	0	1	47	2	5	3	0		14	0	0

ADDENDA.

* No report.

Other Communicable Diseases: Cancer, 2; Chancre, 2; Erysipelas, 4; Gonococcus Infection, 171; Meningitis (Influenza), 2; Syphilis, 63; Tetanus, 2; Ophthalmia Neonatorum, 2; Trachoma, 3; Septic Sore Throat, 1. Tonsillitis, 1.

A Fly Ordinance.

The extermination of the fly in any community must necessarily rest upon and be determined by such means and measures, or the lack of the same, as may or may not be adopted by the authorities of that community. The state has conducted an educational campaign showing the dangers of the house fly, in that they are the carriers of disease germs and filth to food products, and has required that all foods, drinks and drugs sold or offered for sale in Kansas must be properly and effectively protected from contamination by the fly, but the state department of health cannot undertake the supervision or policing of the hundreds and thousands of breeding places of flies that are found in every city in the state; that must be left to the respective cities.

The following ordinance is one sent out by the Indiana State Board of Health to the mayors of the cities of that state, and it is urgently recommended that every city in Kansas adopt and enforce this ordinance at the earliest possible date:

AN ORDINANCE to protect the public health against disease and poisons carried by flies.

WHEREAS, It is commonly known that flies are very dangerous carriers of filth, filth poisons and disease germs, that they are born in filth and are a constant threat against the health, happiness and prosperity of the people; therefore,

SECTION 1. Be it ordained by the mayor and council of the city of —, that it shall be unlawful for any person, firm or corporation to suffer or permit or have upon their premises, whether owned or leased by them, any one or more of the following unsanitary fly-producing, disease-causing conditions, to wit: (1) Animal manure in any quantity which is not securely protected from flies; (2) privies, vaults, cesspools, pits or like places, which are not securely protected from flies; (3) garbage in any quantity which is not securely protected from flies; (4) trash, litter, rags or anything whatsoever in which flies may breed or multiply.

SEC. 2. It shall be the duty of the chief of police or city marshal and health officers, upon learning in any way whatsoever of the existence of one or more of the unlawful conditions described in section 1 of this ordinance, to notify the offender in writing, upon order blanks provided by the city clerk, to remove or abate said unlawful conditions, stating the shortest reasonable time for such removal or abatement. In the event of the refusal or neglect on the part of the notified offender to obey such order, the chief of police or health officer shall inform the street commissioner, upon a blank provided by the city clerk, and it shall then be the duty of said street commissioner, and he shall have power and authority, to remove and abate the reported unlawful conditions; and he shall keep an accurate account of the cost and expenses thereof, which shall be paid from the city treasury upon the sworn vouchers of the street commissioner, and said cost and expenses shall be a lien upon the property and shall be collected by law as taxes are collected and duly paid into the city treasury.

SEC. 3. Any person, firm or corporation found guilty of having created or suffered to exist on premises either owned or leased by them any one or more of the unlawful conditions named in section 1 of this ordinance shall be punished by a fine of not less than five nor more than fifty dollars.

SEC. 4. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed; and whereas an emergency exists, this ordinance shall be in effect upon and immediately after passage.

Food Analysis LXI.

By E. H. S. BAILEY, Director; W. S. LONG, Chemist in Charge.

FEBRUARY 15, 1919.

BEVERAGES.

Those beverages which are marked "passed" or "illegal" are so marked from the standpoint of the enforcement of the food and drugs act, without reference to the enforcement of the prohibitory law.

CIDERS AND IMITATIONS.

- 22650. "Peach and Apple Kysela." Marysville Pop Manufacturing Co., Marysville, Kan. Alcohol, 3.93 percent.
- 22651. "Peach Kysela." Marysville Pop and Manufacturing Co., Marysville, Kan. Alcohol, 0.49 percent.
- 22652. "Log Cabin." Clarksville Cider Co. Alcohol, 6.36 percent.
- 22653. "Silver Queen." William Byers, Kansas City, Mo. Alcohol, 1.21 percent.
- 22654. "Beverage." "Champagne." Vermillion, Kan. Alcohol, 5.40 percent.
- 22655. "Old Log Cabin Brand Cider." Alcohol, 6.85 percent.
- 22662. "Cider." Alcohol, 5.03 percent.
- 22664. "Cider." Walter Pearson, Simpson, Kan. Alcohol, 6 percent.
- 92814. "Sweet Apple Cider." Hutchinson Vinegar Works, Hutchinson, Kan. Retailer, J. W. Herman, Hutchinson, Kan. Alcohol, 4.4 percent.
- 92818. "Cider Made From Pure Apple Juice, Sugar added for Sweetening." Clarksville Cider Co., St. Louis, Mo. Retailer, C. B. Ater Co., Shaffer, Kan. Alcohol, 4.3 percent.
- 92819. "Cider, Sugar Added." William Zyers, Cider Mill, Kansas City, Mo. Ferris & Son, Albert, Kan. Alcohol, 5.4 percent.

MISCELLANEOUS.

- 50075. "Root Beer." Ellsworth Bottling Works, Ellsworth, Kan. Passed.
- 50076. "Strawberry." Ellsworth Bottling Works, Ellsworth, Kan. Passed.
- 50077. "Afri-cola." Ellsworth Bottling Works, Ellsworth, Kan. Passed.
- 50082. "Strawberry." Lyons Bottling Works, Lyons, Kan. Passed.
- 50083. "Orange Pop." Lyons Bottling Works, Lyons, Kan. Passed.
- 50089. "Strawberry Pop." Rice County Bottling Works, Sterling, Kan. Passed.
- 50090. "Ginger Ale." Rice County Bottling Works, Sterling, Kan. Passed.
- 81094. "Strawberry Soda." J. F. McKinney, Columbus, Kan. Retailer, J. F. McKinney, Diamond Dairy, Columbus, Kan. Saccharin present. Illegal.
- 81095. "Lemon Soda." J. F. McKinney, Columbus, Kan.
- 81096. "Ward's Orange Crush." J. F. McKinney, Columbus, Kan.
- 81097. "Near Beer." Antonio Ponch, Mineral, Kan. (Sample broken in transit.)
- 81102. "Orange Crush." Orange Crush Co., Chicago, Ill. Passed.
- 81103. "Substitute Beer." Alcohol, 2.64 percent.
- 81115. "Orange Pop." Becher & Haag, Leavenworth, Kan. Passed.
- 81116. "Strawberry Pop." Becher & Haag, Leavenworth, Kan. Passed.
- 81117. "Orange Pop." Becher & Haag, Leavenworth, Kan. Passed.

92815. "Tomoka." "Orange." Bennett Mineral and Distilled Water Co., Hutchinson, Kan. Passed.

92816. "Strawberry Soda." Bennett Mineral and Distilled Water Co., Hutchinson, Kan. Passed.

92817. "Cream Soda." Coca Cola Co., Hutchinson, Kan. Passed.

CANDY.

60658. "Peanut Candy." National Candy Co., Kansas City, Kan. Froelick Bros., Enterprise, Kan. Worms, grit and other dirt present. Illegal.

60661. "Afternoon Mint." Manufacturers of America, Philadelphia, Pa. Passed.

60662. "U All No Mints." Jobber, Loose-Wiles, Kansas City, Mo. Retailer, J. W. Woolworth, Kansas City, Kan. Manufactured by Manufacturers of America. Passed.

60663. "Junior Afternoon Mints." Manufacturers of America, Philadelphia, Pa. Jobber, Loose-Wiles, Kansas City, Kan. Passed.

CANNED GOODS.

22665. "Peas." Kaw Valley Cannery Co., Lawrence, Kan. Passed.

22674. "Corn." "Purest Brand Sugar Corn." A. A. Linton, Clarksville, Ohio.

22675. "Corn." "Good Health." A. A. Linton, Clarksville, Ohio.

92836. "Jersey" Pears. B. S. Ayars & Sons Co., Bridgeport, N. J. Retailer, E. Larson, Ottawa, Kan. A "swell." Illegal.

92836a. "Seal Brand" Pears. J. W. Willing & Son, Nanticoke, Md. Retailer, E. Larson, Ottawa, Kan. A "swell." Illegal.

92836b. "Gold Seal" Black Raspberries. The Booth Packing Co., Baltimore, Md. Retailer, E. Larson, Ottawa, Kan. A "swell." Illegal.

"EGG SUBSTITUTES."

22648. "Ex-It-Eg." Prepared by Culinary Products Co., Wichita, Kan. Misbranded.

22670. "Exola Brand Baking Compound." Illegal.

22677. "Egg-Kon-O-My." Manufactured for National White Cross League, Chicago, Ill. Misbranded.

92729. "Sa-Van-Eg." Manufactured by the Nacma Co., Chicago, Ill. Misbranded.

EXTRACTS AND IMITATIONS.

50084. "Spirit Lemon." "(U. S. P.)" Faxon-Gallagher Drug Co., Kansas City, Mo. Passed.

70873. "Perfect Flavor." "Lemon with oil of Sesame." J. S. Ziegler, Co., Chicago, Ill. Anthony Wholesale Grocery, Anthony, Kan. Cottonseed oil present. Oil of Sesame, none. Illegal. Misbranded.

70874. "Flavo." "A nonalcoholic substitute for extract of lemon." Evans-Rich Manufacturing Co., St. Louis, Mo. Passed.

92829. "Selzer's Flavoring for Cakes, Pies, etc." Mrs. Harry E. Selzer, Peabody, Kan. Oil of lemon, 1.3 percent. Should contain not less than 5 percent lemon oil. Illegal.

92834. "Cabinet" lemon substitute. "Made from oil of lemon, alcohol, water." The R. T. French Co., Rochester, N. Y., manufacturer. Retailer, J. S. Weethee, Ottawa, Kan. Lemon oil, none. Misbranded.

92835. "Flavo." Substitute for extract of lemon. Evans-Rich Manufacturing Co., St. Louis, Mo. Passed.

HONEY.

22682. "Honey." From Eldorado, Kan. Passed.

22685. "Honey." From Independence, Kan. Passed.

92833. "Honey." Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, W. C. Smith, Ottawa, Kan. Very dark in color, and bitter. Passed chemically.

MILK AND ITS PRODUCTS.

A. MILKS.

1. MILK is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, and and not less than three and one-quarter (3.25) percent of milk fat; and not less than three and one-quarter (3.25) per cent of milk fat; contains no preservative, added water, or other foreign substance.

Inspector's Number.	Substance.	Producer or Retailer.	Residence.	Analysis.		Remarks.
				Fat, percent.	Solids not fat.	
50064	Milk.....	J. A. Hentsell.....	Wellington....	3.0	.....	Illegal.
50065	Milk.....	Gaines Bros.....	Wellington....	3.3	.....	Passed.
50066	Milk.....	D. F. Garnard.....	Wellington....	3.4	.....	Passed.
50068	Milk.....	R. W. Gaddie.....	Wellington....	4.6	.....	Passed.
50092	Milk.....	J. A. Hentsell.....	Wellington....	3.4	.....	Passed.
50093	Milk.....	J. A. Hentsell.....	Wellington....	3.9	.....	Passed.
81079	Milk.....	.....	.....	3.5	.....	Passed.
81122	Milk.....	Gamble Dairy.....	Chanute.....	Sample	sour.	.....
92840	Milk.....	J. H. Massey.....	Osawatomie...	2.6	7.36	Illegal.
92841	Milk.....	J. H. Massey.....	Osawatomie...	4.2	.....	Passed.
92842	Milk.....	J. H. Massey.....	Osawatomie...	4.2	7.1	Illegal.
92843	Milk.....	J. H. Massey.....	Osawatomie...	4.2	7.75	Illegal.
92844	Milk.....	J. A. Fenoughty...	Osawatomie...	2.5	.....	Illegal.
92845	Milk.....	J. A. Fenoughty...	Osawatomie...	3.25	.....	Passed.
92846	Milk.....	J. A. Fenoughty...	Osawatomie...	2.6	.....	Illegal.
92847	Milk.....	J. A. Fenoughty...	Osawatomie...	2.6	.....	Illegal.
92848	Milk.....	J. H. Massey.....	Osawatomie...	4.0	.....	Passed.
92849	Milk.....	J. H. Massey.....	Osawatomie...	4.2	8.1	Illegal.
92850	Milk.....	J. H. Massey.....	Osawatomie...	10.4	4.26	Illegal.
92851	Milk.....	J. H. Massey.....	Osawatomie...	5.4	8.2	Illegal.
92852	Milk.....	J. H. Massey.....	Osawatomie...	4.4	7.89	Illegal.
92853	Milk.....	J. H. Massey.....	Osawatomie...	5.0	.....	Passed.
92854	Milk.....	J. H. Massey.....	Osawatomie...	6.0	.....	Passed.
92855	Milk.....	J. H. Massey.....	Osawatomie...	4.4	8.3	Illegal.
92856	Milk.....	J. H. Massey.....	Osawatomie...	4.8	6.4	Illegal.
92857	Milk.....	J. H. Massey.....	Osawatomie...	5.6	.....	Passed.
92858	Milk.....	J. H. Massey.....	Osawatomie...	3.8	.....	Passed.
92859	Milk.....	J. H. Massey.....	Osawatomie...	4.0	6.5	Illegal.
92860	Milk.....	Geo. H. Barber...	Osawatomie...	5.6	7.7	Illegal.
92864	Milk.....	J. H. Massey.....	Osawatomie...	3.1	7.87	Illegal.
92865	Milk.....	J. H. Massey.....	Osawatomie...	4.2	.....	Passed.
92866	Milk.....	J. H. Massey.....	Osawatomie...	2.8	7.94	Illegal.
92867	Milk, skimmed	J. H. Massey.....	Osawatomie...	0.2	.....	.....
92894	Milk.....	J. H. Massey.....	Osawatomie...	3.1	7.28	Illegal.
92895	Milk.....	J. H. Massey.....	Osawatomie...	3.7	.....	Passed.
92895-a	Milk.....	J. H. Massey.....	Osawatomie...	3.3	.....	Passed.
92896	Milk.....	J. H. Massey.....	Osawatomie...	3.7	.....	Passed.

HERD TEST J. H. MASSEY'S DAIRY, OSAWATOMIE, KAN.

Each of the following samples is representative of the milk from an individual cow taken at the time of milking.

Inspector's Number.	Substance.	Analysis, Fat, percent.	Remarks.
92869	Milk.....	5.2	Passed.
92870	Milk.....	4.9	Passed.
92871	Milk.....	4.0	Passed.
92872	Milk.....	4.4	Passed.
92873	Milk.....	4.3	Passed.
92874	Milk.....	4.0	Passed.
92875	Milk.....	4.8	Passed.
92876	Milk.....	5.0	Passed.
92877	Milk.....	4.1	Passed.
92878	Milk.....	4.0	Passed.
92879	Milk.....	4.6	Passed.
92880	Milk.....	3.8	Passed.
92881	Milk.....	4.0	Passed.
92882	Milk.....	4.0	Passed.
92883	Milk.....	4.3	Passed.
92884	Milk.....	4.0	Passed.
92885	Milk.....	4.3	Passed.
92886	Milk.....	4.2	Passed.
92888	Milk.....	3.9	.....
92889	Milk.....	4.2	Passed.
92890	Milk.....	4.7	Passed.
92891	Milk.....	4.2	Passed.
92892	Milk.....	4.0	Passed.

COMPOSITE SAMPLES OF ABOVE HERD TEST.

92887	Milk.....	4.2	Passed.
92893	Milk.....	4.0	Passed.

CREAM, EVAPORATED MILK, CONDENSED MILK, MALTED MILK.

92693b. "Cream." Wm. McCarty, Waldorf Cafe, Wichita, Kan. Fat, 4.9 percent. Legal standard requires 14 percent. Illegal.

92831. "Elk-Horn Brand. Unsweetened Pure Whole Milk." Waterloo Creamery Co., Omaha, Neb. Elkhorn Valley Condensing Co., Omaha, Neb. Jobber, Fleming & Wilson, Topeka, Kan. Substandard as to fat content. Illegal.

22684. "St. Charles" brand condensed milk. Manufacturer, Borden's Condensed Milk Co., New York City. Sent in by Metal Trades Union, Pedro Miquel, Canal Zone, Panama. Substandard as to fat content. Illegal.

I. S. No. 10802-R. "Unsweetened Evaporated Milk." Elk-Horn Brand. Elkhorn Valley Condensing Co., Omaha, Neb. Contents of ten cans analyzed. All substandard as to fat content, and four nonsterile and unfit for food. Illegal.

ICE CREAM.

1. ICE CREAM is a frozen product made from cream and sugar, with or without flavoring, and contains not less than fourteen (14) percent of milk fat.

Inspector's Number.	Manufacturer.	Residence.	Retailer.	Residence.	Analysis, Fat, percent.	Remarks.
50061	Theodore Combs	Arkansas City.		Arkansas City.	.....	Passed.
50062	Theodore Combs	Arkansas City.		Arkansas City.	.....	Passed.
50062-A	Theodore Combs	Arkansas City.		Arkansas City.	.....	Passed.
50062-B	A. V. Franklin	Arkansas City.		Arkansas City.	.....	Passed.
50063	A. V. Franklin	Arkansas City.		Arkansas City.	.....	Passed.
50067	William Pappas	Wellington.		Wellington.	11.5	Illegal.
50091	Sterling Ice Cream Co.	Sterling		Sterling	12.9	Illegal.
81080	F. O. Mason	Girard		Girard	.....	Passed.
81090	F. O. Mason	Columbus		Columbus	.....	Passed.
81091	J. F. McKinney	Columbus		Columbus	8.5	Illegal.
81092	J. F. McKinney	Columbus		Columbus	19.0	Illegal.
81093*	J. F. McKinney	Columbus		Columbus	.....	Passed.
81098	C. W. Porter	Chanute		Chanute	.....	Passed.
81099	C. W. Porter	Chanute		Chanute	.....	Passed.
81100	A. P. Citti	Chanute		Chanute	.....	Passed.
81101	A. P. Citti	Chanute		Chanute	9.0	Illegal.
81104	Geo. M. Atwood	Kansas City		Kansas City	11.0	Illegal.
81105	G. M. Atwood	Kansas City		Kansas City	12.0	Illegal.
81106	Leavenworth Dairy and Creamery Co.	Leavenworth.	Reif Pharmacy	Leavenworth.	8.2	Illegal.
81107	Frey and Hedges	Leavenworth		Leavenworth	8.6	Illegal.
81108		Leavenworth		Leavenworth	8.4	Illegal.
81109		Leavenworth		Leavenworth	9.0	Illegal.
81110	Ice Creamery Co.	Leavenworth	Orpheum Pharmacy	Leavenworth	6.5	Illegal.
81111	Ice Creamery Co.	Leavenworth		Leavenworth	10.0	Illegal.
81112		Leavenworth		Leavenworth	7.2	Illegal.
81113		Kansas City	DeCourney Creamery Co.	Leavenworth.	10.4	Illegal.
81114		Kansas City	DeCourney Creamery Co.	Leavenworth.	11.6	Illegal.
81118		Columbus	Chas. A. Berlett	Columbus	11.25	Illegal.
81119		Columbus	M. R. Jones	Columbus	11.5	Illegal.
81120		Columbus	Burke Bros.	Columbus	10.75	Illegal.
81121	J. E. Railbel	Galena	H. H. Railbel	Galena	6.7	Illegal.
92806	The Franklin Ice Cream Co.	Kansas City, Mo.	E. S. Hunt	Camp Funston	11.9	Illegal.
92807	The Franklin Ice Cream Co.	Kansas City, Mo.	E. S. Hunt	Camp Funston	11.7	Illegal.
92808	The Franklin Ice Cream Co.	Kansas City, Mo.	E. S. Hunt	Camp Funston	12.3	Illegal.
92809	The Franklin Ice Cream Co.	Kansas City, Mo.	E. S. Hunt	Camp Funston	11.7	Illegal.
92810	The Franklin Ice Cream Co.	Kansas City, Mo.	Missouri Dairy Store	Camp Funston	12.3	Illegal.
92811	The Franklin Ice Cream Co.	Kansas City, Mo.	Louis Charowius	Army City	12.0	Illegal.
92812	The Franklin Ice Cream Co.	Kansas City, Mo.	E. O. Bell	Army City	12.8	Illegal.

OLIVE OIL.

50094. "Olive Oil." "Marco ReUmberto." Manufacturer, S. M. Umberto. Retailer, C. D. Vermillion, Tescott, Kan. Passed.

50099. "Pompeian" Olive Oil. Manufacturers, Sims & Co. Retailer, Hamilton & Strohwig, Norton, Kan. Passed.

50104. "Pompean" Olive Oil. Manufacturers, McPike Drug Co. Retailer, G. C. Hamilton, Stockton, Kan. Passed.

50116. "Olive Oil. U. S. P." Manufacturers, C. D. Smith Drug Co., St. Joseph, Mo. Retailer, Lee-Clark Drug Co., Beloit, Kan. Passed.

60664. "Old Monk" Olive Oil. Manufacturers, Old Monk Olive Oil Co., New York & Chicago. Retailer, A. Wunberg, Kansas City, Kan. Passed.

60667. "Bonita" Olive Oil. Jobbers, Green Bros., Kansas City, Mo. Retailer, J. S. Chontas, Kansas City, Kan. Passed.

60668a. "ReUmberto" Olive Oil. Jobber, Komo Wholesale Grocery Co., Kansas City, Mo. Retailer, J. S. Chontas, Kansas City, Kan. Passed.

60668b. "Pickwick" Olive Oil. Manufactured for Kansas City Wholesale Grocery Co., Kansas City, Mo. Retailer, P. Broll, Kansas City, Mo. Sesame oil present.

60673. "Pompeian Olive Oil." Jobber, Larson Bros., Kansas City, Kan. Retailer, H. P. Brockett, Kansas City, Kan. Passed.

60675. "Arcadia" Olive Oil. Arcadia Food Co., New York. Retailer, Union Pacific Tea Co., Kansas City, Kan. Passed.

60680. "Coureaux" Olive Oil. Reid, Murdock & Co., Chicago, Ill. Retailer, P. E. Burch, Kansas City, Kan. Passed.

60682. "White Label" Olive Oil. Jobber, Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, E. E. Ewing, Kansas City, Mo. Passed.

60682-1. "Purity Olive Oil." Charles P. Grogan, Los Angeles, Cal. Retailer, Flack & DeYoung, Blue Rapids, Kan. Passed.

SYRUPS.

92837. "Home Maid" Sorghum Mixture. "Contains sulphur dioxide." Manufacturer, Ottawa Syrup & Refining Co., Ottawa, Kan. Retailer, Ottawa Wholesale Grocery Co., Ottawa, Kan. Corn syrup, 73.6 percent. Amount claimed on label, 40 percent. Illegal.

92836a. "Home Maid" White Syrup. Manufacturers, Ottawa, Kan. Passed.

92838. "Home Maid" Sorghum Mixture. Manufacturers, Ottawa Syrup and Refining Co., Ottawa, Kan. "40 percent sorghum, 40 percent corn syrup, 20 percent resinous sugar." Passed.

VINEGAR.

60659. "Apple Vinegar." Manufacturer, Western Preserving Co., Kansas City, Mo. Retailer, S. Levin, Kansas City, Kan. Passed.

60660. "Distilled Vinegar." Manufacturer, The Twenhofel Mercantile Co., Kansas City, Kan. Retailer, S. Levin, Kansas City, Kan. Broken in transit.

60665. "Cider Vinegar." Bottled by the Twenhofel Mercantile Co., Kansas City, Kan. Retailer, J. S. Chontas, Kansas City, Kan. Passed.

60666. "Distilled Sugar Vinegar." "Pallas." Jobber, Ridenour-Baker Kansas City, Kan. Retailer, J. S. Chontas, Kansas City, Kan. Passed.

60669. "F. F. O. G. Red Wine." Manufactured for Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, Imperial Groc., Kansas City, Kan. Passed.

60670. "Good Luck Distilled Sugar Vinegar." Dr. Oyster Medicine Co., Kansas City, Mo. Retailer, M. G. Bay, Kansas City, Kan. Passed.

60671. "Good Luck Cider Vinegar." Dr. Oyster Medicine Co., Kansas City, Mo. Retailer, M. G. Bay, Kansas City, Kan. Passed.

60672. "Premium Hostetter's Sugar Vinegar." Tranen Mercantile Co., Kansas City, Mo. Retailer, W. Korenke, Kansas City, Kan. Passed.

60674. "For-Get-Me-Not Hostetter's Sugar Vinegar." Jobber, Elliott Coffey Manufacturing Co., Kansas City, Mo. Retailer, E. Cooper, Kansas City, Kan. Passed.

60676. "For-Get-Me-Not" Cider Vinegar. Elliott Coffey Manufacturing Co., Kansas City, Mo. Retailer, Union Pacific Tea Co., Kansas City, Kan. Broken in transit.

60677. "Corn Sugar Vinegar." Jobber, Emrich Vinegar Co., Kansas City, Mo. Retailer, W. R. Keeler, Kansas City, Kan. Passed.

60678. "Premium Cider Vinegar." Tranen Mercantile Co., Kansas City, Mo. Retailer, Kansas Ave. Importing Co., Kansas City, Kan. Passed.

60679. "Heinz Cider Vinegar." Manufacturer, H. J. Heinz, Pittsburg, Pa. Retailer, John Clavaos, Kansas City, Kan. Passed.

60681. "Puritan Cider Vinegar." Manufacturer, Puritan Vinegar Co., Kansas City, Mo. Retailer, P. E. Burch, Kansas City, Kan. Passed.

60683. "Eagle Vinegar." Jobber, Bittman Todd, Leavenworth, Kan. Retailer, C. E. Morris, Blue Rapids, Kan. Passed.

60684. "Stark Vinegar." Manufacturer, Stark Manufacturing Co., Atchison, Kan. Retailer, C. E. Morris, Blue Rapids, Kan. Passed.

60685. "Punch Brand Cider Vinegar." Manufactured for Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, H. Honstead, Waterville, Kan. Passed.

60686. "Pure Apple Cider Vinegar." Manufacturer, Hekelnkaemper Bros., Atchison, Kan. Passed.

60687. "Symns Vinegar." Manufactured for Symns Grocery Co., Atchison, Kan. Retailer, McKilvy, Waterville, Kan. Passed.

60688. "Gypsy Boy Vinegar." Manufactured for the Dolan Mercantile Co., Atchison, Kan. Retailer, McKilvy, Waterville, Kan. Passed.

92647. "Cider Vinegar." Broken in transit.

92823. "Cider Vinegar." Manufacturer, Speas Vinegar Manufacturing Co., Kansas City, Mo. Retailer, the Theodore Poehler Merc. Co., Topeka, Kan. Passed.

92824. "Distilled Vinegar." Manufacturer, Leo & Greenwood Vinegar Co., Topeka, Kan. Retailer, Kuehne Bros., Topeka, Kan. Colored.

92825. "Apple Vinegar." Manufacturer, Udell Vinegar Co., Topeka, Kan. Passed.

92826. "Pure Apple Cider Vinegar." Jobber, the H. D. Lee Merc. Co., Kansas City, Mo., and Salina, Kan. Retailer, the Owl Grocery, Topeka, Kan. Passed.

92827. "Honey Vinegar." Manufacturer, A. D. Raffington, Hutchinson, Kan. Passed.

92830. "Corn Sugar Vinegar." Manufacturer, Emrich, Kansas City, Mo. Retailer, Dunlap Merc. Co., Dunlap, Kan. Passed.

MISCELLANEOUS.

22649. Raisins. Sent in from Holyrood, Kan., to be tested for poison. Passed.

22660. Corn Flour. Sent in from Manhattan, Kan., to be tested for poison. Passed.

22663. Graham Crackers. Sent in from Topeka, Kan., to be tested for poison. Passed.

50060. "Badex." Lee-Warren Milling Co., Salina, Kan. Retailer, Henry Toburen, Tonganoxie, Kan. Passed.

811. "Baking Powder." "American." Manufacturer, E. M. Lannigan, Coffeyville, Kan. Slightly substandard.

92800. "India Gum." N. B. Wood Manufacturing Co., St. Louis, Mo. Retailer, Newton Ice Cream Co., Newton, Kan. Passed.

92805. "Corn Meal." The Nicholson Products Co., Albany, Mo. Retailer, the Kaw Milling Co., Topeka, Kan. Passed.

92820. "Golden Age Machine Dried Noodles." The Cleveland Macaroni Co., Cleveland, Ohio. Retailer, the Theo. Poehler Merc. Co., Topeka, Kan. Passed.

92821. "Golden Age Machine Dried Spaghetti." The Cleveland Macaroni Co., Cleveland, Ohio. Retailer, the Theo. Poehler Mercantile Co., Topeka, Kan.. Shortage, 3.5 percent.

92822. "Golden Age Machine Dried Macaroni." The Cleveland Macaroni Co., Cleveland, Ohio. Retailer, the Theo. Poehler Mercantile Co., Topeka, Kan. Passed.

Revision of U. S. Pharmacopœia.

Dr. S. J. Crumbine, Topeka, Kan.:

DEAR SIR—Will you kindly notice in your next issue of the BULLETIN the fact that the United States Pharmacopœial Committee will proceed in the work of the tenth revision of that national standard in the year 1920. It is well that this fact should be widely circulated, and it is of special interest to those who are recipients of the Board of Health reports. Physicians, manufacturing pharmacists and pharmaceutical chemists should send in to the members of the revision committee, as soon as possible, any suggestions for revision of standards as may occur to them. The chairman of the revision committee, Dr. Chas. H. LaWall, 145 North Tenth street, Philadelphia, Pa., will gladly receive, either direct or through any members of the revision committee, any of these suggestions.

Already a number of suggestions have been received from Dr. C. L. Alsberg, chief of the Bureau of Chemistry, Washington, D. C., and some suggestions have come to the writer as one of the members of this revision committee.

There are a number of drugs of recognized therapeutical value which have not thus far been standardized because they have not been completely analyzed, *i. e.*, the analyses have not been sufficiently completed to make a dependable standard. At the present time the drug laboratory is analyzing completely, for the purposes mentioned, the well-recognized drug "gelsemium." It is hoped in the near future that a complete analysis of the different alkaloids, some of which have never before been recognized as existing in this root, will be made and the alkaloids isolated. When this is accomplished it will be quite practical to introduce standards for the drug named. The director of your laboratory would be very glad to receive any correspondence with regard to suggestions which may occur to physicians or pharmacists and which will have a bearing upon the revision above referred to.

The convention for the appointment of the new committee will take place in 1920, and it is hoped the revision committee will at once be able to get into active service so that the publication of the tenth revision will be as promptly executed as possible.

It would be well to mention in this connection that the Bureau of Chemistry has just published in its *Monthly Review* the new standard

for creosote as reported by the chairman of the revision committee, Dr. Charles H. LaWall. The standard follows:

"Mix 4 mils. of creosote and 4 mils. of glycerine; then add 1 mil. of water; shake the mixture gently and allow it to stand. A creosotic layer separates equal to or greater in volume than the creosote taken (coal-tar creosote)."

Very truly yours,

L. E. SAYRE,

*Director of State Drug Laboratory of the Board of Health,
and Member of Committee of Revision of the U. S. P.*

My Grocery.

The cash I spend in food each day
Evokes a string of words from me;
I count them over—every bill I pay
My grocery—My grocery!
Each roast a graft—each steak a snare
To make my life one daily grind;
I add each list unto the end—and there
My finish find.
Oh, tenderloins! in vain we yearn—
Our country's need we cannot doubt—
To win the war! and strive at last to learn
To go without.

—Laura D. Simmons.

The weaker sex
Is that portion
Of the human race
Who goes downtown
In zero weather
In a half-masted lace waist
And pumps
To buy a muffler
And woolen socks
For her husband
So he can go to work.

Tuneful Tonsil Talk.

Mary had a little cough,
Its bark was loud and sneezy,
And everywhere that Mary went
That cough was always wheezy.
It went with her to school, of course,
And met the school physician,
Who found her adenoids were large,
According to his mission.
But now those horrid adenoids,
Her cough and tonsils vicious,
Repose upon a doctor's shelf,
And Mary feels delicious.

To-day.

Sure this world is full of trouble;
I ain't said it ain't.
Lord, I've had enough and double
Reason for complaint.
Rain an' storm have come to fret me—
Skies were often gray:
Thorns and braimbles have beset me
On the road—but, say,
Ain't it fine to-day!

What's the use of always weepin',
Makin' trouble last?
What's the use of always keepin'
Thinkin' of the past?
Each must have his tribulation—
Water with his wine.
Life—it ain't no celebration.
Trouble—I've had mine;
But to-day, ain't it fine!

It's to-day that I'm a-livin',
Not a month ago.
Having', losin', takin', givin',
As time wills it so.
Yesterday a cloud of sorrow
Fell across my way—
It may rain again to-morrow;
It may rain—but, say,
Ain't it fine to live to-day!

BULLETIN

OF THE

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S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

May, 1919

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Good-bye, John!

What a wheat crop—Kansas!

Is your baby registered?

Better be safe than sorry.

The un-flyproofed toilet is the season's greatest danger.

The person dead from typhoid fever is just as dead as those
killed by shrapnel.

Don't forget to be immunized against typhoid fever before
going on your vacation, or taking an extended journey.

The annual meeting of the American Public Health Association
will be held in New Orleans, October 27-30.

Would you accompany with God—then have a great conviction.—*Estey.*

MORBIDITY REPORT FOR APRIL, 1919

[illegible]

MORBIDITY REPORT FOR APRIL, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Poliomyelitis (epidemic).	Influenza.	Other Diseases (see Addenda)
Lincoln.....	0	0	0	0	8	0	1	0	0	3	0	0	31	0
Linn.....	0	0	0	3	2	0	0	1	0	0	0	0	7	0
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Lyon, except. Emporia.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Marion.....	0	0	2	1	1	0	0	0	1	0	0	0	73	1
Marshall.....	0	3	0	7	1	0	0	0	0	3	0	0	31	2
McPherson*.....	0	0	0	0	0	0	0	0	0	1	0	0	25	0
Meade.....	0	1	0	0	0	0	0	2	0	3	0	0	11	0
Miami.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitchell*.....	0	2	0	1	1	0	0	1	0	1	0	0	4	0
Montgomery, except. Coffeyville.....	0	1	1	1	12	0	0	0	0	0	0	0	5	3
Independence.....	1	1	0	1	12	0	0	0	0	3	0	0	1	3
Morris.....	0	0	1	7	0	0	0	0	1	0	0	0	3	1
Morton.....	0	0	0	0	0	0	0	0	0	0	0	0	34	0
Nemaha.....	0	1	11	6	5	0	0	0	3	1	0	0	12	4
Neosho, except. Chanute.....	0	3	0	1	0	0	0	0	4	0	0	0	0	0
Ness.....	0	68	0	0	9	0	0	0	1	0	0	0	0	3
Norton.....	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Osage.....	1	11	1	2	3	0	0	0	2	0	0	0	3	0
Osborne.....	0	0	0	0	0	0	0	0	0	2	0	0	32	1
Ottawa.....	0	1	0	0	0	0	0	0	0	1	0	0	73	0
Pawnee.....	0	0	1	0	0	0	0	0	3	0	0	0	19	0
Phillips.....	0	0	0	0	7	0	0	0	0	0	0	0	4	0
Pottawatomie.....	0	0	1	0	0	0	0	0	0	0	0	0	29	0
Pratt.....	0	0	0	4	0	0	0	0	0	0	0	0	5	0
Rawlins.....	0	3	0	1	0	0	0	2	0	0	0	0	3	1
Reno, except. Hutchinson.....	0	0	0	0	0	0	0	0	0	0	0	0	115	0
Republic.....	0	0	0	0	0	0	0	0	0	0	0	0	14	0
Rice.....	0	1	1	0	12	0	0	2	2	0	0	0	0	6
Riley, except. Manhattan.....	0	0	1	1	0	0	0	0	1	0	0	0	23	1
Rooks.....	0	0	0	0	0	0	0	7	1	0	0	0	8	0
Rush.....	0	2	1	6	0	0	0	0	10	2	0	0	15	0
Russell.....	0	0	1	0	0	0	0	23	13	0	0	0	3	7
Saline, except. Salina.....	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Scott.....	0	0	0	0	0	0	0	0	0	1	0	0	14	0
Sedgwick, except. Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	67	0
Seward.....	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Shawnee, except. Topeka.....	0	0	0	4	1	0	0	2	14	0	0	0	6	12
Sheridan.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sherman.....	0	2	1	1	0	0	0	1	4	0	0	0	10	0
Smith.....	2	22	1	0	4	0	0	21	15	2	0	0	1	79
Stafford.....	0	0	0	2	0	0	0	0	1	0	0	0	0	1
Stanton*.....	0	1	0	0	0	0	0	0	0	0	0	0	150	1
Stevens.....	0	0	1	0	4	0	0	0	0	0	0	0	77	8
Sumner, except. Wellington.....	0	12	1	4	0	0	0	28	1	0	0	0	104	0
Thomas.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego.....	0	3	0	0	0	0	0	0	1	0	0	0	0	0
Wabaunsee.....	0	0	1	1	0	0	0	2	0	0	0	0	32	1
Wallace*.....	0	0	0	0	1	0	0	0	0	0	0	0	13	0
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	0	1	0	0	0	0	0	2	1	0	0	0	7	0
Woodson.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Wyandotte, except. Kansas City.....	0	0	0	0	1	0	0	0	0	1	0	0	13	0
Rosedale.....	0	8	11	7	33	0	0	9	6	33	0	0	88	33
	0	0	0	0	0	0	0	0	0	0	0	0	0	118

ADDENDA.

* No report.

Other Communicable Diseases: Cancer, 18; Chancre, 4; Erysipelas, 8; Gonococcus Infection, 1; Syphilis, 162; Trachoma, 10; Rabies, 3; Pellagra, 1; Septic Sore Throat, 1.

Social Medicine, Medical Economics and Miscellany.

THE BLACK DEMON, OR EXORCISING SMALLPOX.

In a publication of the American Baptist Foreign Mission Society, Dr. Charles R. Manley, of the Clough Memorial Hospital, Ongole, South India, describes graphically the ceremonial of the natives of a community in driving out an epidemic of black smallpox. It should make good reading for the antivaccinationists. Dr. Manley's story is as follows:

The tom-toms beat all night and this morning the streets are fairly covered with chicken feathers. For black smallpox has taken the city and must be driven out. The priests have told the people to kill chickens and strew their feathers in the streets so they will catch the eye of Polerimah, the plague demon, and distracts her attention. The tom-toms throbbing in the air will either frighten her or please her so much that she will forget to jump down the throats of any careless mortals whom she might find with mouths opened in speaking, or with lips parted, or sleeping with uncovered faces. Yes! the goddess Polerimah is angry with the people.

Yesterday afternoon they made a big *tamasha*, or feast, in her honor. A few of us foreigners heard that it was to take place and went down to the bazaar to see what we could see.

In the very heart of the bazaar, our native servants told us, we should find Polerimah in all her glory. We wedged our way through the masses of men and women who filled the place and found ourselves at last before the little hut of green reeds that had been erected over the goddess. I must confess I was surprised and disappointed at what I saw when I peeped in. After all the fuss they had made and the huge pile of rice they had heaped up as an offering, I expected to see at least a life-sized lady demon. But instead I saw only a squat little figure, no more than a foot tall, made of black mud and covered with tinsel. She was soaked with lemon-colored water which dripped off her shoulders into a widely spreading puddle round her feet.

"Why so much wetness?" I asked with an amused smile.

"They must keep her cool," answered our guide with great dignity. "If she gets warm she gets mad. So they have built this temple of reeds to protect her from the sun, and every few minutes the priests pour saffron tinted water over her. Whatever happens she must be kept cool."

In front of the "wickie-up" was a constantly increasing pile of cooked rice awaiting its sprinkling of life-blood to make it a food fit to satisfy the ravenous and blood-thirsty appetite of the goddess. Just beyond the rice-pile we could see a priest sitting on the ground bending over a smudge pot of burning incense. At that moment he turned to look at us and the terrible shape of his countenance made us cringe. His eyes were blood red and swollen and his sensuous mouth hung open. He was waiting for the demon to leap through the smoke and down his throat.

"Then," said our guide, "when he is demon-possessed, he will speak, and whatever he says the people will do it."

We watched for a while the delegations of men and women coming from different parts of the town, bringing their offerings to Polerimah. With the blare of horns, the throb of tom-toms, the cries of the frantic wild-eyed dancers, band after band came in unvarying march around the little hut-temple, presenting their offerings and augmenting the rice pile. The priests meanwhile fought among themselves for the various titbits and dainties that the more zealous women had brought with their rice. The scene began to take on the aspects of a dog-fight as the priests, getting more excited, snarled and snatched delectable morsels from the women and even from one another. Hearing a commotion behind us we turned to see a band of priests coming up on the run, leading a buffalo bull. He was dyed with saffron, a wonderful canary yellow, and hung with garlands and with flowers. Behind him came a huge, savage black-faced fellow, holding aloft a great sickle-shaped knife in a hand that was white as snow.

"The bull is another offering," muttered my guide in my ear. "The big priest with the white hand must strike off his head with a single blow of the knife, and then the blood must be sprinkled all over the sacred rice pile before the goddess will accept her feast."

By this time the sun had slid pretty well down toward the horizon, and it was evident that something more was about to happen. A sudden yell was followed by a mad surging of the crowd toward the temple, which they tore to pieces in almost less time than it takes to tell it. In another instant every one was waiving a reed in the air.

"Now, what will they do?" we asked.

"They are arranging to escort the goddess out of the town," said our guide. "They have done everything they could to appease her anger and make her happy; and now they are going to carry her out of town while she is still in a happy frame of mind, and throw her in the ocean."

The procession was formed. First came the priest carrying on his head a basket in which were the bull's entrails, crowned by his head, holding in his hideous, grinning mouth the bone of his front foreleg. Behind him came the goddess, carried on the head of another priest. And as the throng proceeded down the street, people by the wayside wrung the necks of chickens and threw the headless bloody bodies over the people's heads toward the image. The horns blew, the tom-toms throbbed and the people yelled themselves hoarse, waving their reeds in the air. What is the priest screaming?

"Yell, brother, yell. Let confusion reign! Let not the terrible Polerimah suspect our fell designs, and fall upon us before we are safely rid of her!"

Following in the wake of the procession, I came up to a young mother who was hurrying along dragging a tiny child by the hand. The little girl was staggering, her bare body was a mass of scars, her eyes heavy

and dull with the intoxication of the dread disease. The child mother cried out to Polerimah to have mercy. As her wails mingled with the shrieks of thousands the procession passed down the crooked, dusty road and out of sight.

To-night, out there in the dark somewhere, many young mothers are sitting in black despair, because in spite of all their sacrifices to the demon the lives of their babies, stricken with the fearful plague, are surely ebbing away.

What Shall the Harvest Be?

All indications point to one of the most abundant harvests the state has ever known. Our granaries will be filled to overflowing. The price of wheat is fixed, therefore we know just what to anticipate in financial returns from this great harvest we are about to reap. Many are already planning how they will spend the returns from this harvest, how they will send Will and Mary to college, and how they will build an addition to the house and install conveniences for the good wife, etc. All this is perfectly natural, BUT—

While you are harvesting the wheat, while you are putting up the hay, while you are threshing the grain, you will be reaping another harvest. This harvest and its results you have not given due consideration. There will be a harvest of *Typhoid Fever* this year, as in years passed. The typhoid season in Kansas is harvest season, not on account of the weather, but on account of conditions. The typhoid problem in Kansas is a fly problem, pure and simple, and the prevalence of the fly and his ability to transmit typhoid depend entirely on conditions that you maintain about your premises.

The fly is a great "home body"—he stays around pretty close to the place where he is born—therefore if you will do away with the places where flies breed and hatch on your place, you will reduce the number to a point below the danger line. If you will take all the manure from your barns and clean up the barnyard once a week, and if you will see that all decaying organic matter is kept away from your home, you will have removed the principal hatching place of the fly.

But even with the fly present, he can do no harm in the way of transmitting typhoid unless you furnish him with the germs to transmit. Typhoid fever germs are carried only by the human animal; cows, dogs, horses, etc., do not carry typhoid, so far as we know. Man gives off typhoid germs almost entirely in his excreta, that is, in his urine and bowel discharges. If these are properly taken care of the fly cannot transmit typhoid to any member of your family, because the fly cannot get the germs to transmit. This may seem a difficult task, but it is not; all you have to do is to build a fly-proof toilet on your place *and see that everybody uses the toilet.*

Harvest season will bring many thousands of strangers to the state. Some of them will work for you. Many of these laborers will be typhoid carriers; that is, they will be people who have had typhoid and recovered,

it may have been years ago, but who still have the typhoid germs in their excreta. These people may not know that they are carriers—most carriers are not aware of the fact that they are carriers—but this does not make them any the less dangerous if they are careless about the disposal of their excreta. *Build a fly-proof toilet and see that everybody on your place uses it.*

Typhoid carriers get the germs on their hands; therefore have your old employees do the milking. Do not put strangers at this job unless you know that they are not carriers, and the only way to know it is to have examinations made that will require several weeks. Be careful about your harvest-time cook. Typhoid carriers working as cooks may infect your entire family. Keep your old hands (this usually means yourself and family) at the milking and food-handling work.

Do away with the fly hatcheries on your place, build a fly-proof toilet and see that it is used by everyone, and handle your own food products, just as you did before harvest season, and the air castles you are building will, in all probability, become real castles. Neglect these things and the "typhoid harvest" may overshadow the grain harvest. There may be no Will or Mary to send to college, there may be no real need for the addition to the house or for those conveniences for the good wife, for the good wife may be a part of the "typhoid harvest" and Will and Mary may be a part of the "typhoid harvest."

Plant as you will, cultivate to the highest degree of perfection, and yet you cannot control the grain harvest; the weather must be right; but you can absolutely control the "typhoid harvest." Do away with the fly hatcheries, provide and use sanitary conveniences, see that your milk and other foods are protected from contamination, and you can go about your work with absolute confidence that you will not contract typhoid fever at your home.

Who's Who.

Ladies and Gentlemen:

"We have with us this evening," Major Charles Henry Lerrigo, M. D., who recently returned from service overseas, he, with other distinguished colleagues and doughboys of the A. E. F., having first settled their little business with the Huns, for which purpose they went "over there" early in 1918. The Major will, in a subsequent issue of the *Bulletin*, address you from the office of the State Registrar of Vital Statistics, to which position he was elected before sailing for France, but being determined to "see it through" with the Huns before transacting any more business in America, he refused to take the oath of office until the overseas job was finished. Having completed the task to the entire satisfaction of the Medical Department of the Army and approval of General Pershing (witness his promotion from First Lieutenant to Major), he is with us this evening much to our satisfaction and delight.

The Central Division of Vital Statistics of the Kansas State Board of Health is a large and important division, having a personnel of nine, with extras on occasions; about 1,000 local registrars act as the field

force for gathering approximately 75,000 birth and death records, which, after recording in the local offices, are sent in to the Central Division for classification, card indexing, study and permanent record. In addition, 105 probate judges issue about 20,000 marriage licenses annually, which are returned with the certificate of marriage by the officiating minister or local officer, all of which are required to have the same careful accounting as birth and death records; and thus the vital records of the citizens of the state are carefully safeguarded under the direction of the State Registrar. Ladies and gentlemen, it gives me great pleasure to introduce to you this evening the new State Registrar, Major Charles Henry Lerrigo, M. D.

We also have with us this evening another doctor and Major, Doctor Thomas Dyer Tuttle, the recently elected Epidemiologist of the Kansas State Board of Health, who succeeds Dr. John J. Sippy, who served the Board with such distinguished ability for the past six years. Doctor Tuttle was formerly State Health Officer of Montana and Washington, in which positions he made an enviable reputation for himself. He was recently commissioned as "Surgeon" in the Reserve of the U. S. Public Health Service, which grade is equivalent to the rank of Major. Doctor Tuttle belongs to that old-fashioned school of citizens who believe that laws and regulations were made to be enforced and not for adornment or to clutter up the statute books, and he has vigor of expression and motility of action that should be a warning sign to those who, through neglect or malice, habitually violate the health laws; and yet there are springs of good-fellowship and cordiality welling up all over his smiling countenance. I take great pleasure in introducing our new Epidemiologist, Dr. Thomas D. Tuttle, Surgeon, U. S. P. H. S. Reserve.

We also have with us this evening, ladies and gentlemen, Dr. B. K. Kilbourne, Captain, U. S. P. H. S. Reserve and Chief of the Division of Venereal Diseases. Dr. Kilbourne was chosen for this position without his knowledge or consent; this is the way it happened: When the revelations of the examinations made for military service were announced, it became apparent that something must be speedily done to combat the spread of venereal disease among the civilian population, and when, through appropriations made by the federal government, it became necessary to find a chief for our newly organized Division of Venereal Diseases, we at once thought of selecting one of the best of our county health officers, one who has shown ability, adaptability, vision and initiative, and we just naturally thought of Dr. Kilbourne, and so the call was extended without any preliminary or inquiry into his political allegiance, family genealogy or social standing—right off the bat—just like that; after several days to talk it over with his one wife and four children, the Doctor telephoned "I'm coming," and he is here. I take great pleasure, therefore, in introducing Doctor B. J. Kilbourne, Passed Assistant Surgeon, U. S. P. H. S. Reserve.

What is "Ptomain" Poisoning?

The term "ptomain" poisoning has become a cloak for ignorance. Jordan says the "ptomain poisoning is a convenient refuge from etiologic uncertainty."

In fact, any acute gastro-intestinal attack resulting from a great variety of causes is apt to be called "ptomain" poisoning. Selmi, in 1873, first used the word ptomain to include the poisonous products of putrefaction which gave the reaction then looked on as characteristic of vegetable alkaloids. From the time of Selmi, when ptomains were regarded as animal alkaloids, our conception of these substances has changed markedly. The last attempt to give precision to the term was by Vaughan, who defined ptomains as intermediate cleavage products of protein decomposition.

Rosenau and his associates at Harvard have been searching in vain for the past year and a half for ptomains that might cause gastro-intestinal or other symptoms. Split products of protein putrefaction are readily isolated. Some of these products have physiologic activity, but none of them thus far has been demonstrated to be poisonous when taken by the mouth.

The so-called ptomains isolated and described by Selmi, Nencki, Brieger, Schmiedeberg, Faust and Vaughan were usually obtained from putrid organic matter that had decomposed past the point at which it would be used as food. Furthermore, most of these substances were tested by injecting them subcutaneously or intravenously into animals. Many substances are poisonous when thus introduced parenterally, though they may be harmless by the mouth. Again, many of the so-called ptomains isolated and described have since been shown to contain impurities.

Chemists are now seldom confident of the purity of protein fractions, even when obtained in crystalline form. The chemical search for split protein products as the cause of "ptomain" poisoning has practically been abandoned. Most of these split products are amines, which are either not poisonous at all, or no more so than their corresponding ammonia salts.

The chemical resemblance between muscarin and cholin has directed the work toward the phosphatids, but thus far this line of research has not helped solve the puzzle of "ptomain" poisoning. Chemists avoid the use of the word ptomains, for the reason that it lacks precision. This is a curious instance of the popular use of a technical term that sounds well, but means little. Only clinicians cling to it as a convenient refuge.

Ptomain is a term for chemical substances of uncertain origin, unknown nature and doubtful existence.—*Chicago Bulletin*.

Baking Experiments With So-called Egg Substitutes.

THE USE OF SO-CALLED EGG SUBSTITUTES IN SPONGE CAKES.

PURPOSE. To determine whether or not egg substitutes could be used in sponge cakes, which are purely an egg product. In the directions with the substitutes, it said to substitute but half the number of eggs with the substitute.

METHOD. Proportions of ingredients used: Sugar $\frac{1}{4}$ c., 50 gms.; flour, $\frac{1}{4}$ c., 25 gms.; eggs 1.

Sift flour with a pinch of salt. Add about two or three tablespoons water to the sugar and cook to 113.5° C. Pour this sirup over the stiffly beaten egg white. Then fold in the egg yolk which has been beaten until stiff and lemon-colored, with lemon juice for flavoring added. When thoroughly combined, fold in very lightly the flour. Pour into an ungreased and unfloured pan, and bake at 185° C. for twenty to twenty-five minutes.

RESULTS. (See below.)

CONCLUSIONS. That a true sponge cake, one in which no baking powder is used, cannot be made by substituting half the number of eggs with commercial egg substitutes. In all cases the cakes stuck to the pan when done, which is not true of a good sponge cake, and this sticking was due to the sugar in the mixture cooking to the tin.

USE OF SO-CALLED EGG-SUBSTITUTES IN SPONGE CAKE.

Ingredients used.					Baking.		Results.
No.	Sugar.	Flour.	Eggs.	Egg substitute.	Temperature, degrees.	Time, minutes.	
I.	$\frac{1}{4}$ c. 50g.	$\frac{1}{4}$ c. 25g.	1	.....	185	20	Nice, light cake; even texture; well raised.
II.	$\frac{1}{4}$ c. 50g.	$\frac{1}{4}$ c. 25g.	$\frac{1}{2}$	$\frac{1}{2}$ t. Eggno.	185	20	Coarse texture; rose to less than half the height of No. I. Fell in center.
III.	$\frac{1}{4}$ c. 50g.	$\frac{1}{4}$ c. 25g.	$\frac{1}{2}$	$\frac{1}{2}$ t. Eggo.	185	20	Raised to about half the height of No. I; tough.
IV.	$\frac{1}{4}$ c. 50g.	$\frac{1}{4}$ c. 25g.	$\frac{1}{2}$	$\frac{1}{2}$ t. Eggnit.	185	20	Fell in center; was coarse and tough in texture. Rose to about one-half the height of No. I.
V.	$\frac{1}{4}$ c. 50g.	$\frac{1}{4}$ c. 25g.	$\frac{1}{2}$	$\frac{1}{2}$ t. Agosave.	185	20	Was tough and coarse in texture; did not raise any more than II, III or IV.

Another baking test was made to determine whether or not the addition to an original receipt, excluding eggs and substitute, of more baking powder than called for would produce a cake favorable to ones in which substitutes were used in place of eggs.

In this test an increase in volume was obtained comparable to that produced in the cases of the substitutes.

	Protein, percent.	Fat, per- cent.	Starch, (diff.)	Value per pound in terms of whole eggs from standpoint of—				Cost per pound.	
				Weight.	Fat.	Protein.	Claim.	Substi- tute.	Dry eggs at 40 cents per doz.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Eggette.....	27.1	4.8	68.1	32	3.3	18.0	128	\$1.07	\$1.06
Eggine.....	24.9	4.1	71.0	32	2.8	16.6	128	1.00	1.06
Magic Egg-Saver	4.6	4.4	91.0	32	3.0	3.0	128	0.67	1.06
Eggnit.....	16.5	5.0	80.5	32	2.0	11.0	160	1.33	1.06
Agosave.....	17.2	8.5	74.3	32	5.9	11.5	107	1.33	1.06
Eggoe.....	11.7	2.4	85.9	32	1.7	7.8	164	1.14	1.06
Eggno.....	15.8	7.9	76.3	32	5.5	10.5	164	1.14	1.06

Figure 32 in column (4) represents the number of whole eggs containing one pound of dry material. This is the number of eggs to which one pound of the substitute would be equal if the latter were the equal of eggs in all respects.

The figures in column (5) represent the number of eggs containing the quantity of fat present in one pound of the substitute.

Column (6) shows the number of eggs containing the amount of protein present in one pound of substitute.

Column (7) shows the number of eggs to which one pound of substitute is equal according to the claims of the manufacturer.

Columns (8) and (9) show the relative cost per pound of substitute and of the dry material of eggs.

The average weight of a hen egg is two ounces. The shell weighs about $\frac{1}{3}$ ounce; the edible portion weighs about $1\frac{2}{3}$ ounces. When dried it will weigh about $\frac{5}{10}$ ounce. A teaspoonful of most of these so-called egg substitutes which the manufacturers claim to be equal to one egg in baking and cooking will weigh about $\frac{1}{10}$ ounce, or $\frac{1}{6}$ that of the dry matter of one egg.

Averaging the selling prices of the seven substitutes herewith analyzed, the consumer is paying more per pound for the substitute than he would pay per pound for the dry material of hen eggs, calculating the hen eggs at 40 cents per dozen. These so-called substitutes are chiefly starch, that is 70 to 90 percent, while the dried matter of eggs is essentially protein and fat.

Analysis of a sample of Eggette in December showed the claim of manufacturers on cartons to be false. The claim was made that the contents of the package was equivalent to 12 eggs. Analysis showed that on a basis of protein value it was equal to only 1.7 egg. On a basis of fat value it was equal to only $1\frac{1}{100}$ of 1 egg. In fuel value it was equal to only 2.6 eggs.

It would seem that the manufacturers of many of these so-called egg substitutes are exploiting the name of a highly valuable and high-priced food to further the sale of their product.

Typhoid Inoculation of the Tuberculous.

In this Journal for March 20, 1919, an article, "Smallpox Vaccination for Tuberculous Patients," disproves the idea that persons having tuberculosis should not be vaccinated because of the supposed bad effect of vaccination on the tuberculosis patient. The American Review of Tuberculosis, issue of February, 1919, tells us that tuberculosis patients are also capable of enduring antityphoid inoculation without bad effects or retardation of the arresting of tuberculosis. An outbreak of typhoid occasioned the inoculation of forty patients in incipient, moderately advanced, and far advanced stages of tuberculosis. Results and conclusions drawn from the inoculations lead to the acceptance of the following facts:

1. Typhoid fever may occur in patients suffering from active or arrested pulmonary tuberculosis.

2. Inactive pulmonary tuberculosis exerted no appreciable effects upon the course of the typhoid fever, but as the two deaths from typhoid fever occurred among those with active pulmonary tuberculosis, it appears possible that active pulmonary tuberculosis may influence the typhoid fever and render recovery less likely.

3. Typhoid fever does not influence inactive pulmonary tuberculosis, and apparently also does not affect active pulmonary tuberculosis,

4. Antityphoid inoculations did not apparently influence the inactive pulmonary tuberculosis, and increase of pulmonary symptoms, such as occurred in those with active pulmonary tuberculosis, could readily be explained by the temporary increase of symptoms usual in such patients. No permanent untoward results followed in any case.

5. The immediate results of treatment in patients receiving antityphoid inoculation differed in no way from the immediate result obtained in two other years when antityphoid inoculations were not given.—*The Minnesota Public Health Association Journal*

All Signs Failed.

He had opened up a fish shop, and he ordered a new sign painted. It read, "Fresh Fish Sold Here."

"What did you put the word 'fresh' in for?" said his first customer. "You wouldn't sell them if they weren't fresh, would you?"

He painted out the word, leaving just "Fish Sold Here."

"Why do you say 'here'?" asked his second customer. "You're not selling them anywhere else, are you?"

So he rubbed out the word "here."

"Why use 'sold'?" asked the next customer. "You're not giving them away, are you?"

So he rubbed out everything but the word "Fish," remarking:

"Well, nobody can find fault with that sign now, anyway."

A moment later another customer came in.

"I don't see the use of that sign 'Fish' up there," said he, "when you can smell them a mile away."—*Tit-Bits*.

THE CONTROL OF VENEREAL DISEASES.

WHEREAS, The Kansas State Board of Health, in coöperation with the United States Public Health Service, is conducting a vigorous campaign against venereal diseases; and,

WHEREAS, Physicians are particularly interested in that part of the campaign which relates to the diagnosis and treatment of venereal diseases; and,

WHEREAS, The Kansas State Board of Health has arranged to provide facilities for free laboratory examinations of specimens for the diagnosis of venereal diseases, to furnish free arsphenamine for indigent cases, and has adopted the policy of establishing clinics for the treatment of venereal diseases in the larger cities: therefore, be it

Resolved, That the Kansas State Medical Society heartily indorse the campaign being waged by the State Board of Health, and especially that part of the campaign which provides facilities for the diagnosis and treatment of venereal diseases; and be it further

Resolved, That the Kansas State Medical Society call upon all physicians in the state to coöperate with the health authorities in their efforts to combat venereal diseases; and be it further

Resolved, That the local authorities in the larger cities of the state be urged to provide for the establishment of clinics in coöperation with the State Board of Health; and be it further

Resolved, That copies of these resolutions be sent to the Surgeon General of the Public Health Service, the secretary of the State Board of Health, the editor of the Journal of the American Medical Association, and the editor of the State Medical Journal, with a request that they be published.

The Red Souvenir.

(From one of the Army Section demobilization leaflets.)

When you've opened your bag on the parlor floor,
And poured out your souvenirs,
Your helmet and buttons and bits of shell
That you snatched out of those pits of hell
And saved for souvenirs;

When you've spread them out and told your yarn,
Not once, but a hundred times;
And shown the scar of your schrapnel wound
And handed your nurse's picture round
And blushed, yes, a thousand times;

When you've gone to bed in the same old room,
With the same old good-night kiss,
And you think of to-morrows' days and years
And laugh at the horrors of oldtime fears
When rats gave you your only kiss;

When peace and quiet caress you again
And your soul will have its say,
And it stalks forth grim and fearsomely
And stands in the moonlight for you to see
And you know what it's going to say—

Can you look straight into piercing eyes
And swear you've kept the faith;
That through all war's hell you've guarded the trust,
And you've brought no red souvenir of lust
To betray and tarnish that faith?

Can you fall asleep with a smile on your lips
And awake with a laugh at to-morrow.
To find no rust on the gleam of your shield,
No blot on the flag that made Germany yield?
Then laugh, and take joy in to-morrow!

Public Health Nursing Enabling Act.**HOUSE BILL No. 195.**

AN ACT authorizing cities of the first class having a population of less than 85,000 and the cities of second class to levy and collect taxes for the purpose of paying the expenses of the public health nursing association.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That the mayor and city council or board of commissioners of the cities of the first and second class in the state of Kansas are hereby authorized and empowered to levy a tax not to exceed one-fifth of one mill on a dollar, as other city taxes are levied, for the purpose of raising a fund for the maintenance of any public health nursing association which is or hereafter may be duly incorporated in any city of the first or second class.

SEC. 2. That said tax when collected shall be paid in to the city treasurer and credited to a special fund which shall be known and designated as the Public Health Nursing Association fund, and such money shall be expended and appropriated by the mayor and council or board of commissioners as may be provided by city ordinance in such city: Provided, however, this section shall not apply to cities of the first class having a population in excess of 85,000.

SEC. 3. This act shall take effect and be in force from and after its publication in the statute book.

We venture to express the hope that a considerable number of cities will make the necessary levy to provide for public health nurses, than which no other expenditure would prove so profitable and worthwhile.

Facts About Rats.

Rats do a damage in the United States in one year of over \$100,000,000.00.

It costs an average of \$1.82 a year for every rat on your premises in loss of food and damage they do.

One pair of rats will produce a progeny of over 650,000 in three years.

Over \$15,000,000.00 of property is lost each year by fires, caused by rats gnawing away the insulation of electric wires and eating through gas pipes.

A rat frequently weighs over one pound and measures more than 19 inches from tip to tip.

They make nests between floors and ceilings and in rubbish piles.

Will swim a mile and one-half to meet or leave a ship.

One of the most dangerous mediums known for spreading diseases.

Gnaw through heavy timbers, frequently weakening the structure of buildings and piers.

Do thousands of dollars damage in libraries by eating the bindings on books.

Since the last breaking out of the black plague in India they have carried the disease into every continent of the globe.

Ships coming from Asia have brought plague infected rats in the last four years into the Philippines, Hawaii, three cities in the United States, besides the West Indies and Liverpool, England.

Many rats have one of the most terrible diseases known, called Trichina (a form of leprosy), for which there is no known or satisfactory cure.

No premises having rats will be free from dangers of disease until the rats are completely exterminated.

Government Aides.

The Great World War brought so many public health problems to the front that were so important to the morale and the military efficiency of the country that the federal government detailed to the various states trained medical officers to assist the State Department of Health in the work of the department relating to the control and supervision of communicable diseases.

Kansas was indeed fortunate in having two very efficient and capable men assigned to the State Board of Health, Captain Millard Knowlton, M. C. U. S. A., and Lieut. Chas. T. Shelton, M. C. U. S. A.

Captain Knowlton had a wide experience with the New Jersey State Board of Health and a broad technical training at the Harvard School of Health Officers and the Massachusetts Institute of Technology, so that he was well equipped to at once take charge of the newly created Division of Venereal Disease of the Kansas State Board of Health. The Captain has organized the Division with conspicuous ability, and in the year he has been with us has shown an aptitude and a genius for constructive work in this new field of public health activities that has attracted attention beyond the boundaries of the state. We regret that the time for his departure is at hand, for his wise counsel will be sorely missed.

Lieutenant Shelton, assisted Dr. Sippy in the Division of Communicable Disease and gave the Division and the state a splendid and valuable service. The lieutenant had an unusual training in the laboratories and communicable disease division of the medical officers' training camp at Camp Funston, which training was put to good use in his work throughout the state. His ability as an organizer was tested during the awful days of the influenza epidemic, and his conspicuous service in that capacity will always be remembered with gratitude.

INGALLS ON KANSAS.

Kansas is the nucleus of our political system, around which forces assemble, to which its energies converge and from which its energies radiate to the remotest circumference. Kansas is the focus of freedom, where the rays of heat and light concentrated into a flame that melted the manacles of the slave and cauterized the heresies of state sovereignty and disunion. Kansas is the core and kernel of the country, containing the germs of its growth and the quickening ideas essential to its perpetuity. The history of Kansas is written in capitals. It is punctuated with exclamation points. Its verbs are imperative. Its adjectives are superlative. The commonplace and prosaic are not defined in its lexicon. Its statistics can be stated only in the language of hyperbole. The aspiration of Kansas is to reach the unattainable; its dream is the realization of the impossible. Alexander wept because there were no more worlds to conquer. Kansas, having vanquished all competitors, smiles complacently as she surpasses from year to year her own triumphs in growth and glory. Other states could be spared without irreparable bereavement, but Kansas is indispensable to the joy, the inspiration and the improvement of the world. It seems incredible that there was a time when Kansas did not exist; when its name was not written on the map of the United States; when the Kansas cyclone, the Kansas grasshopper, the Kansas boom and the Kansas Utopia were unknown. I was a student in the junior class at Williams College when President Pierce, forgotten but for that signature, approved the act establishing the Territory of Kansas, May 30, 1854. I remember the inconceivable agitation that preceded, accompanied and followed this event. It was an epoch. Destiny closed one volume of our annals, and opening another, traced with shadowy finger upon its pages a million epitaphs, ending with Appomattox. Kansas was the prologue to a tragedy whose epilogue has not yet been pronounced; the prelude to a fugue of battles whose reverberations have not yet died away. Floating one summer night upon a moonlit sea, I heard far over the still waters a high, clear voice singing:

*To the West! To the West! To the land of the free,
Where the mighty Missouri rolls down to the sea;
Where a man is a man if he's willing to toil,
And the humblest may gather the fruits of the soil.*

BULLETIN

OF THE

Kansas State Board of Health.

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TOPEKA, KAN.

June, 1919

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Vaccinate!

Are you "fit to win"?

Dirt is matter out of place.

Don't drink it too cold these hot days!

Our pamphlets on sex hygiene for the asking.

Only the unvaccinated die from typhoid fever.

The science of hygiene is the science of right living.

Eat plenty of vegetables and fruit and less meat during hot weather.

When taking your vacation, leave your business and troubles at home!

**A store or meat market full of flies is a sufficient reason for you to change your place
of trading.**

**Sanitation is the application of the principles of cleanliness; their application is
getting things clean and keeping them clean.**

**Every Kansas-born baby is entitled to have his citizenship and legal rights safe-guarded
by registration, free of cost. Let's go, Kansas! One hundred percent birth registration!**

**Neither a butcher nor a bartender is looked upon as a good subject for a surgical
operation, because one has probably had too much meat and the other too much drink.**

MORBIDITY REPORT FOR MAY, 1917.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox.			Measles	German Measles (rubella)	Whooping Cough.	Cholera	Measles	Pneumonia (acute lobes)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Influenza	Other Diseases (see Addenda)
THE STATE.....	25	268	1	2	5	51	211	107	47	8	1	344	340	
Allen, except.	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Iola	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Atchison, except	0	2	0	3	0	0	0	0	3	0	0	0	0	0
Atchison city	0	34	1	23	0	0	0	0	0	0	0	0	0	0
Barber	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Barton, except.	0	7	0	1	0	0	0	1	0	0	0	0	7	0
Great Bend	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Bourbon, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Scott	0	1	1	1	2	0	0	4	0	0	0	0	0	14
Brown	0	1	0	4	2	0	1	1	0	0	0	0	94	0
Butler, except.	0	3	0	2	0	0	0	3	1	0	0	0	0	0
Augusta	0	1	0	1	0	0	0	2	0	0	0	0	0	0
Eldorado	5	3	2	3	2	0	0	11	2	0	0	0	14	2
Chas	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chautauqua	0	0	1	0	4	0	0	0	0	0	0	0	0	0
Cherokee, except.	0	0	0	0	5	0	4	0	0	0	0	0	0	0
Galena	0	2	0	0	0	0	0	0	1	0	0	0	0	11
Cheyenne	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Clark	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Clay	0	0	5	0	0	0	0	1	3	0	0	0	3	0
Cloud, except.	0	1	0	0	8	0	0	0	0	0	0	0	0	0
Concordia	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Coffey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	1	0	0	0	2	1	0	0	0	0	0
Cowley, except.	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Arkansas City	0	3	1	18	0	1	0	11	0	0	0	0	0	2
Winfield	0	0	0	1	1	0	4	1	0	0	0	0	0	1
Crawford, except	0	10	0	12	0	0	2	2	4	0	0	0	1	1
Pittsburg	2	1	0	5	0	0	0	0	3	0	0	0	0	4
Decatur	0	0	0	11	0	0	0	0	0	0	0	0	14	0
Dickinson	0	0	3	15	1	0	0	2	0	0	0	0	1	1
Doniphan	0	2	0	12	0	0	1	0	1	0	0	0	0	0
Douglas, except.	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Lawrence	1	0	0	0	0	1	0	3	0	0	0	0	0	11
Edwards	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ellis	0	0	0	0	0	0	0	2	4	0	0	0	0	0
Ellsworth	0	0	0	0	0	1	0	1	1	0	0	0	0	1
Finney	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ford, except.	0	1	0	0	0	0	0	4	0	0	0	0	0	0
Dodge City	0	3	1	2	0	0	1	0	0	0	0	0	1	0
Franklin, except.	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	1	0	1	0	2	0	0	0	0	0	0
Geary, except.	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Junction City	0	1	1	1	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	4	0	0	0	0	6	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Greeley	0	0	2	1	0	0	0	2	4	0	0	0	2	0
Greenwood	0	0	0	0	0	0	0	13	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0	7	1	0	0	0	0	0	0
Harper	0	0	0	0	0	0	0	4	0	0	0	0	0	2
Harvey, except	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Newton	0	5	0	0	0	0	0	2	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Jackson	0	3	0	2	0	0	0	0	0	0	0	0	5	1
Jefferson	0	15	0	4	2	0	0	0	0	0	0	0	0	2
Jewell	0	0	3	0	0	0	0	3	0	1	0	0	19	0
Johnson	0	1	1	2	0	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Kingman	0	1	0	1	1	0	0	0	0	0	0	0	0	0
Kiowa	0	0	0	0	0	0	0	32	1	0	0	0	0	0
Labette, except.	0	0	0	1	0	0	0	2	1	0	0	0	0	17
Parsons	0	13	0	0	1	0	0	4	0	0	0	0	0	13
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	1	4	1	0	0	0	1	0	0	0	0	1	1
Leavenworth city	0	2	18	2	0	0	0	7	0	0	0	0	0	10

MORBIDITY REPORT FOR MAY, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Polio-myelitis (epidemic)	Influenza	Other Diseases (see Addenda)
Lincoln	0	0	0	0	0	0	0	0	0	1	0	0	0	2
Linn	2	4	1	0	0	0	0	0	0	1	0	0	0	1
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	1	0	0	2	4	0	0	6	2	0	0	0	1	0
Marshall	0	9	1	8	0	0	0	0	0	0	0	0	1	0
McPherson	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Meade	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Miami	0	6	0	0	2	0	0	0	0	4	0	0	0	0
Mitchell	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Montgomery, except Coffeyville	0	1	0	0	0	0	0	3	4	1	0	0	0	1
Independence	2	0	0	7	8	0	0	0	0	0	0	0	0	2
Morris	0	2	0	0	5	0	0	1	0	0	0	0	0	0
Morton	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	0	1	2	2	0	0	0	1	0	0	0	0	0
Neosho, except Chanute	0	2	0	0	0	0	0	0	0	0	0	0	0	1
Ness	0	24	0	0	8	0	1	1	0	0	0	0	0	0
Norton	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Osage	1	16	0	1	0	0	0	0	1	0	0	0	36	2
Osborne	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Phillips	0	0	0	0	0	0	0	0	1	0	0	0	12	0
Pottawatomie	0	0	3	1	0	0	0	0	0	0	0	0	0	0
Pratt	0	1	0	0	0	0	0	1	1	0	0	0	2	0
Rawlins	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Reno, except* Hutchinson	3	4	2	0	3	0	0	2	8	0	0	0	0	10
Republic	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Rice	0	0	0	4	0	0	0	2	0	0	0	0	0	0
Riley, except Manhattan	0	0	0	4	0	0	4	0	5	1	0	0	0	0
Rooks	0	0	4	5	2	0	5	30	7	0	0	0	0	0
Rush	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell	0	0	0	1	0	0	0	1	3	0	0	0	0	0
Saline, except Salina	0	0	0	2	0	0	0	0	0	0	0	0	0	1
Salina	0	0	0	3	1	0	1	1	6	0	0	0	2	7
Scott	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita	0	1	0	0	0	0	0	1	0	0	0	0	1	0
Wichita	1	43	3	2	4	0	0	35	5	1	0	0	0	101
Seward	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Shawnee, except Topeka	0	0	4	0	0	0	0	2	0	0	0	0	0	0
Topeka	1	3	4	0	2	0	0	24	0	0	1	0	2	27
Sheridan	0	0	0	0	0	0	0	0	0	0	0	1	18	0
Sherman	0	1	0	2	1	0	0	0	0	0	0	0	0	1
Smith	0	0	1	4	0	0	0	0	0	0	0	0	0	0
Stafford	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington	0	1	0	5	0	0	0	3	2	1	0	0	0	0
Wellington	0	0	2	0	0	0	0	0	4	0	0	0	1	4
Thomas	0	0	0	9	0	0	0	0	0	2	0	0	4	0
Trego	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Wabaunsee	1	0	4	2	0	0	0	0	0	0	0	0	4	0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita*	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	1	4	2	0	0	0	0	0	2	0	0	0	0	1
Woodson	0	0	0	0	0	0	0	0	8	0	0	0	0	0
Wyandotte, except Kansas City	0	2	0	0	1	0	0	0	0	0	0	0	2	0
Kansas City	1	6	7	7	16	0	3	12	3	4	2	0	2	39
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	27

ADDENDA.

* No report.

Other Communicable Diseases: Cancer, 20; Chancroid, 7; Erysipelas, 4; Gonococcus Infection, 187; Syphilis, 109; Trachoma, 6; Pellagra, 4; Septic Sore Throat, 2. Sleeping Disease, 1; Ophthalmia Neonatorum, 1.

Disease Germs.

We are small, very small, but our number is great, and there is strength in numbers.

Our family has many characteristics; some are so fat they are actually round, while some are long and slender, but each is fitted for the peculiar work assigned to him.

Our family is well organized. Each member or group of members will undertake only a specific piece of work; one never interferes with the work of another. Sometimes we help one another, but each in his own way, one never attempting to perform a task in the way assigned another.

We love the dark, not because our deeds are evil (we cannot see it that way), but because sunlight kills us.

We love dirty places, not because we think they are dirty, but because it is so much easier for us to live and thrive in such places.

We love little children, because it is so easy for us to build our homes in them. The only trouble is that most of them die before we are able to rear a family of creditable size.

We love the weak and sickly, because they make such nice, comfortable homes for us; they are so easy to work.

We hate sunlight; we hate cleanliness; we hate strong, robust people; we simply have no use for any of them.

Our family tree goes back to the beginning of the world, but you only recently discovered us and gave us our name—Pathogenic Bacteria.

Termination of Cases Prosecuted for Violation of Food, Drugs, Sanitary, Weights and Measures Laws.

JANUARY 1, 1919, TO JULY 1, 1919.

- W. S. Peck, Arkansas City. Unsanitary condition. Termination: January 6, 1919; \$10 fine and costs.
- A. Wishroop, Paola. Uncovered food. Termination: January 15, 1919; \$10 fine and \$6.75 costs.
- Fred Koehler, Paola. Uncovered food, etc. Termination: January 15, 1919; \$25 fine and \$6.75 costs.
- J. H. Massey, Osawatomie. Adulterated milk. Termination: February 4, 1919; \$30 and costs.
- John Fonoughty, Osawatomie. Nos. 92844, 92846, 92847. Substandard milk. Termination: February 4, 1919; \$5 and costs.
- J. H. Massey, Osawatomie. Dirty milk. Termination: February 25, 1919; \$50 fine, and \$5 costs.
- Ed. Griffith, manager, Burlington. Uncovered food, etc. Termination: February 27, 1919; \$25 fine, \$5 costs.
- W. H. Johnson, Osawatomie. Adulterated milk. Termination: March 4, 1919; not guilty.
- John Schweizer, Caldwell. No. 81, 164. Substandard milk. Termination: March 22, 1919. \$5 and costs.
- W. J. Briggs, Burlington. Nos. 50,128, 50,129. Substandard peppermint; substandard spirits of camphor. Termination: April 2, 1919; \$30 fine, \$5 costs.

- Scren K. Jonson, Hutchinson. Adulterated milk. Termination: April 9, 1919; \$50 fine, \$3.45 costs.
- George Sours, Hutchinson. Short-weight butter. Termination: April 9, 1919; \$50 fine, \$3.45 costs.
- G. G. Hamilton, Stockton. No. 50,105. Substandard spirits of camphor. Termination: April 16, 1919; \$5 fine, \$1 costs.
- P M. Leonhard, Leona. No. 50,139. Adulterated ice cream. Termination: May 12, 1919; \$5 fine, \$2 costs.
- A. E. Wyatt, Hiawatha. No. 50,140. Adulterated ice cream. Termination: May 12, 1919; \$5 fine, \$2 costs.
- P. Schmitt, Seneca. No. 50,145. Adulterated ice cream. Termination: May 13, 1919; \$5 fine, \$2 costs.
- Roy Kessler and W. H. Stinson, Hutchinson. Short-weight butter. Termination: May 13, 1919; \$50 fine and costs.
- E. A. Redd, Hutchinson. Dirty milk. Termination: May 13, 1919; \$25 and costs.
- Purity Ice Cream Co., Iola. Nos. 81,177, etc. Manufacturing adulterated ice cream; second offense. Termination: May 19, 1919; \$500 fine, \$7.40 costs.
- L. W. Beebe, Hutchinson. Nos. 92,981, etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- O. L. Redd, Hutchinson. Nos. 92,990, etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- A. Peterson, Hutchinson. Nos. 92,995, etc. Adulterated milk. Termination: June 6, 1919; \$10 fine, \$5.55 costs.
- R. Nills, Hutchinson; Nos. 93,005, etc. Adulterated milk. Termination: June 6, 1919; \$5 fine, \$5.55 costs.
- Fred McMurray, Hutchinson. Nos. 93,012, etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- T. L. Brown, Hutchinson. Nos. 93,030, etc. Adulterated milk; Termination, June 6, 1919; \$5 fine, \$5.55 costs.
- H. Gibson, Hutchinson. Nos. 93,048, etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- O. F. Horn, Hutchinson. Nos. 93,070, etc. Adulterated milk. Termination: June 6, 1919; \$5 fine; \$5.55 costs.
- M. L. Stewart, Hutchinson. Nos. 93,065, etc. Adulterated milk. Termination: June 6, 1919; \$5 fine, \$5.55 costs.
- C. R. Nelson, Hutchinson. Nos. 93,035 etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- R. Luallen, Hutchinson. Nos. 93,096, etc. Adulterated milk. Termination: June 7, 1919. \$5 fine, \$5.55 costs.
- Geo. Kearney, Hutchinson. Nos. 93,128, etc. Adulterated milk. Termination: June 7, 1919; \$5 fine, \$5.55 costs.
- B. L. Kallhoff, Hutchinson. Nos. 93,132, etc. Adulterated milk. Termination: June 6, 1919; \$5 fine, \$5.55 costs.
- W. Kallhoff, Hutchinson. Nos. 93,135, etc. Adulterated milk. Termination: June 6, 1919; \$5 fine, \$5.55 costs.
- J. D. Meyer, Great Bend. Uncovered candy, etc. Termination, June 18, 1919; \$10 fine, \$5 costs.
- Raymond Diehl, Lawrence. Nos. 244 and 245. Adulterated milk. Termination: June 11, 1919. \$25 fine, \$7.45 costs.
- Nusso and Aalice, Arma. Unwrapped bread. Termination: June 27, 1919; \$10 fine, \$9.75 costs.
- A. Zuich, Frontenac. Unwrapped bread. Termination: June 27, 1919; \$10 fine, \$9.75 costs.
- Peter Kiaddo, Ringo. Insanitary slaughter house. Termination: June 27, 1919; \$10 fine, \$9.75 costs.

Principal Causes of Death.

Census Bureau's Summary of Mortality Statistics for 1917.

WASHINGTON, D. C., June 25, 1919.—The Census Bureau's annual compilation of mortality statistics for the death-registration area in continental United States shows 1,068,932 deaths as having occurred in that area in 1917, representing a rate of 14.2 per 1,000 of population. Of these deaths, nearly one-third were due to three causes—heart diseases, pneumonia and tuberculosis—and nearly another third resulted from the following nine causes: Bright's disease and nephritis, apoplexy, cancer, diarrhea and enteritis, arterial diseases, influenza, diabetes, diphtheria, and bronchitis. The death-registration area of the United States in 1917 comprised 27 states, the District of Columbia, and 43 cities in non-registration states, with a total estimated population of 75,000,000, or about 73 percent of the estimated population of the United States. (The territory of Hawaii has recently been added to the registration area, but the figures given in this summary relate only to continental United States.)

The deaths from heart diseases (organic diseases of the heart and endocarditis) numbered 115,337, or 153.2 per 100,000 population. The death rate from this cause shows a remarkable decrease as compared with 1916, when it was 159.4 per 100,000. There have been fluctuations from year to year, but in general there has been a marked increase since 1900, the earliest year for which the annual mortality statistics were published, when the rate for heart diseases was only 123.1 per 100,000.

Pneumonia (including bronchopneumonia) was responsible for 112,821 deaths, or 149.8 per 100,000. This rate, although much lower than that for 1900 (180.5) or for several succeeding years, is higher than that for any year during the period 1908-1916. The lowest recorded rate for pneumonia was 127 per 100,000 in 1914. The mortality from this disease has fluctuated considerably from year to year since 1900, the general tendency having been downward until 1914 and upward from 1914 to 1917.

Tuberculosis in its various forms caused 110,285 deaths, of which 97,047 were due to tuberculosis of the lungs. The death rate from all forms of tuberculosis was 146.4 per 100,000, and from tuberculosis of the lungs, 128.9. The rate from tuberculosis of all forms declined continuously from 200.7 per 100,000 in 1904 to 141.6 per 100,000 in 1916, the decrease amounting to nearly 30 percent; but for 1917 an increase is shown. Until 1912 more deaths were due to tuberculosis than to any other single cause, but in that year and during the period 1914-1917 the mortality from tuberculosis was less than that from heart diseases, and in 1917 it fell below that from pneumonia also.

Bright's disease and acute nephritis caused 80,912 deaths, or 107.4 per 100,000. The mortality rate from these diseases has increased from 89 per 100,000 in 1900, with some fluctuations from year to year, and since 1914 the increase has been continuous.

Apoplexy was the cause of 62,431 deaths, or 82.9 per 100,000. The rate from this disease increased gradually, with occasional slight de-

clines, from 1900 to 1912, and since 1913 the increase has been continuous.

Cancer and other malignant tumors caused 61,452 deaths, of which number 23,413, or 38 percent, resulted from cancer of the stomach and liver. The rate from cancer has risen from 63 per 100,000 in 1900 to 81.6 in 1917. The increase has not been continuous, there having been three years—1906, 1911, and 1917—which showed declines as compared with the years immediately preceding. The decrease in 1917 as compared with 1916, however, was very slight—from 81.8 to 81.6. It should be borne in mind that at least a part of the increase in the death rate from cancer may be apparent rather than real, being due to a greater degree of accuracy in diagnosis and to greater care on the part of physicians in making reports to registration officials.

Diarrhea and enteritis caused 59,504 deaths, or 79 per 100,000. The rate from this cause has fallen somewhat in recent years, having been 90.2 in 1913, and is much lower than the corresponding rate for 1900, which was 133.2. More than four-fifths of the total deaths charged to these causes in 1917 were of infants under two years of age.

Arterial diseases of various kinds—atheroma, aneurism, etc.—resulted in 19,055 deaths, or 25.3 per 100,000. The rate from these causes increased continuously from 6.1 in 1900 to 25.6 in 1912, since which year it has fluctuated somewhat without showing any pronounced change.

Influenza was responsible for 12,974 deaths, or 17.2 per 100,000. This rate is the highest shown for any epidemic disease in 1917, but is much lower than the corresponding one for the preceding year, 26.4 per 100,000. The influenza rate, which fluctuates greatly, was higher in 1901, when it stood at 32.2, than in any subsequent year prior to the occurrence of the recent epidemic.

Deaths from diabetes numbered 12,750, or 16.9 per 100,000. The rate from this disease, although slightly lower than in 1916, has risen almost continuously since 1900, when it was 9.7.

Next to that for influenza, the highest rate appearing for any epidemic disease in 1917 was for diphtheria, 16.5 per 100,000, representing 12,453 deaths. The rate from this disease was somewhat higher in 1917 than in the preceding year, when it stood at 14.5 per 100,000.

Bronchitis caused 12,311 deaths, or 16.3 per 100,000. This rate is lower than that for any preceding year except 1916, when it was 16.2. The proportional decline from 1900, for which year the bronchitis rate was 45.7, to 1917, amounting to 64 percent, was greater than that shown for any other important cause of death.

TYPHOID FEVER.

Typhoid fever resulted in 10,113 deaths, or 13.4 per 100,000. The mortality rate from this cause also has shown a remarkable reduction since 1900, when it was 35.9, the proportional decrease amounting to 63 percent. This highly gratifying decline demonstrates in a striking manner the efficacy of improved sanitation and of the modern method of prevention—the use of the antityphoid vaccine.

MEASLES, WHOOPING COUGH, AND SCARLET FEVER.

These three children's diseases were together responsible for 21,723 deaths of both adults and children, or 28.8 per 100,000. The rates for the three diseases separately were 14.3, 10.4, and 4.2, respectively, as compared with 11.1, 10.2, and 3.3 in 1916. As in 1913 and 1916, the deaths due to measles outnumbered those resulting from either of the other diseases, but in 1914 and 1915 whooping cough caused the greatest mortality. In every year since and including 1910, as well as in several preceding years, measles has caused a greater number of deaths than scarlet fever.

EXTERNAL CAUSES.

Deaths due to external causes of all kinds—accidental, suicidal and homicidal—numbered 81,953 in 1917, corresponding to a rate of 108.8 per 100,000 population.

The greatest number of deaths charged to any one accidental cause—11,114, or 14.8 per 100,000—is shown for falls. The rate for this cause varies but slightly from year to year.

Next to falls, the greatest number of accidental deaths—8,649, or 11.5 per 100,000—resulted from railroad accidents and injuries. This rate is greater than the corresponding rates for 1914, 1915, and 1916 (10.7, 9.9, and 11.3, respectively), but is lower than that for any year from 1906—the first year for which deaths from this cause were reported separately—to 1913, inclusive.

Burns—excluding those received in conflagrations and in railroad, street car, and automobile accidents—were responsible for 6,830 deaths, or 9.1 per 100,000. The death rate from burns was greater than that for the preceding year, 8 per 100,000, and was also greater than the rate for any earlier year covered by the Bureau's records, with the exception of 1907.

Deaths from automobile accidents and injuries in 1917 totaled 6,724, or 8.9 per 100,000 population. This rate has risen rapidly from year to year, but not so rapidly as the rate of increase in the number of automobiles in use.

Accidental drowning caused 5,550 deaths, or 7.4 per 100,000. This rate is considerably less than that for any preceding year since 1910, and is also decidedly below the average for the decade 1901-1910.

Deaths due to accidental asphyxiation (except in conflagrations) numbered 3,375, or 4.5 per 100,000. This rate is somewhat higher than that for any year during the preceding ten-year period.

Mine accidents and injuries resulted in 2,623 deaths, or 3.5 per 100,000. This rate is greater than the rates for the preceding three years and for 1912, but is lower than those for other recent years.

Deaths due to injuries by vehicles other than railroad cars, street cars and automobiles numbered 2,326, or 3.1 per 100,000. The rate from this cause has declined somewhat during the past ten years, probably because of the decrease in the use of horse-drawn vehicles.

Deaths resulting from street-car accidents numbered 2,277, corresponding to a rate of 3 per 100,000. This rate is greater than those for

the two years preceding and is the same as that for 1912, but is less than the rates for other recent years.

Machinery accidents caused 2,112 deaths, or 2.8 per 100,000, a rate materially greater than that for any preceding year covered by the Bureau's mortality records.

Hot weather caused 1,964 deaths, or 2.6 per 100,000. This rate is considerably above those for most of the years covered by the Bureau's records, but is somewhat lower than 2.9 in 1916 and is far below 5.3 in 1911. The rate from this cause naturally varies greatly from year to year.

The number of suicides reported for 1917 was 10,056, or 13.4 per 100,000. This rate is the lowest shown for any year since 1903.

Other deaths due to external causes, including homicides, totaled 18,353, or 24.4 per 100,000.

Talk with Your Doctor.

We are just emerging, and only partly victorious, from an epidemic that has not overlooked a community in the entire country. The number of deaths due to influenza and its after effects reaches into the hundreds of thousands, and the semiinvalids more than double these figures. And the point of danger is not yet passed. There have been recurrences of the outbreak in different localities, and Missoula is no exception.

The insidiousness of the disease should be a warning signal to everyone who has had it and apparently has recovered. In the majority of cases it has left some organic weakness that must be watched and corrected.

But the effects from this malady are perhaps no worse and no more dangerous than those brought on through our customary modes of living. The most widespread disease of adults is cardiovascular degeneration—wearing out of the arteries and heart, and the inevitable expression of this wearing out either is hardened arteries, Bright's disease, apoplexy, or slow, insidious heart muscle failure.

The development of these is so slow and pernicious that generally the victim does not suspect their presence until the breaking point is reached. Usually some accident or intercurrent illness is required to bring the patient under the observation of a physician, and often the degeneration is far advanced before the accident occurs, so that there remains for the doctor only a chance to keep the patient comfortable as long as possible.

And the public, which is fond of cracking jokes about the doctor with his pills and potions, consumes each year thirty times as much medicine—pills and potions—as the entire medical profession prescribes. This means that when a person does not "feel right," instead of going to a physician for expert advice, he goes to a friend with his trouble, the said friend prescribing for him some medicine that may or may not be a suitable remedy for the trouble.

When you reach thirty-five and begin slowly to accumulate weight, fall off in general efficiency, become a bit shortwinded on exertion, have

stomach distress in the form of excessive belching, "gas," fullness after meals and numerous other symptoms attributed in almanacs to the liver, you are very likely on the way to a breakdown from cardiovascular degeneration. And the remedy? If your case has gone too far there is none. If not, select a competent physician, one not afraid to call a spade a spade, put your case in his hands, do what he tells you to do, and start the fight for life.

The purpose of this is not to scare the public into a fit of worry—our nerve has been shaken badly enough during these past six months—but to call attention to the necessity of watching and guarding against bad health possibilities. The present generations are probably suffering from some of the indiscretions of their forebears, when heavy breakfasts were the rule, when exercise of the proper kind was regarded as a fad. We are making a good fight against tendencies we have inherited physically, and with the proper amount of precaution there is no reason why length of life should not be increased. While the matter of health primarily is a subject for the individual, yet it is a social question as well. And we must do one thing and refrain from doing another as much from the standpoint of our close relations with our fellows, whether it is good or bad, as we do or do not do it because it is beneficial or harmful to ourselves.

Take care of the little ailments and the bigger ones will never have to be attacked.—*Daily Missoulian (Montana)*, April 21, 1919.

Report on Pepsodent.

Five samples of Pepsodent, collected from different retailers in different parts of the state, were submitted to assay, determining thereby the peptic strength.

The soluble principles from 12½ grams of the Pepsodent were extracted and filtered. Of this filtrate a one-thirtieth portion was taken as representing, from the pepsin constituent claimed to be present (0.7-0.8 percent of pepsin), a quantity of pepsin corresponding to the amount in the United States Pharmacopœial test, assuming that this quantity thus used would contain evident activity.

A blank was run at the same time, submitting the sample of known strength to exactly the same conditions of temperature, agitation, etc.

If the pepsin alleged to be contained in the Pepsodent were equal in power to the United States Pharmacopœial requirements, the coagulated albumen employed in the test as prescribed by the United States Pharmacopœial assay would be practically all digested.

RESULT OF ANALYSES.*

	Undigested albumen.
22693	7 cc.
50130	10 cc.
22692	14 cc.
81172	19 cc.
22694	22 cc.
Blank inert pepsin leaves a residue of.....	23 cc.

* An absolutely inert pepsin run through the same process yields as a residue 23 cc. (See above.)

It would seem, from the results of our analyses of the samples collected from the market, that there is a very evident variation in peptic strength of Pepsodent, as will be seen from the figures above, which show the volume of undigested albumen left as a residue after the reaction is complete.

We have experimented with freshly prepared magma of acid calcium phosphate and pepsin and find that the peptic reaction from the freshly prepared mixture gives the required peptic strength, using the United States Pharmacopœial method of assay. To account for the variation in the above samples one would naturally suppose, knowing the nature of this enzyme, that this was due to a process of deterioration of the ferment contained in the preparation.

G. N. WATSON, *Chemist*.

L. E. SAYRE, *Director*.

A United States Supreme Court Decision.

On April 14, 1919, the supreme court of the United States rendered a decision in the case of the Corn Products Refining Company, plaintiff in error, against the food officials of Kansas, to the effect that a state has the power under the constitution to require a statement on the labels of the percentages of the ingredients of a food, even if such labels reveal the formulas of the food.

The regulation of the Kansas Health Department reads:

"(1) In the case of syrups, the principal label shall state definitely in conspicuous letters, the percentage of each ingredient, in the case of compounds, mixtures, imitations or blends. When the name of the syrup includes the name of one or more of the ingredients, the preponderating ingredient shall be named first."

The court said:

"Evidently the purpose of the requirement is to secure freedom from adulteration and misbranding, the mischief of misbranding being that people may be misled with respect to the wholesomeness or food value of the compound. And it is too plain for argument that a manufacturer or vender has no constitutional right to sell goods without giving to the purchaser fair information of what it is that is being sold. The right of a manufacturer to maintain secrecy as to his compounds and processes must be held subject to the right of the state, in the exercise of its police powers and in promotion of fair dealing, to require that the nature of the products shall be fairly set forth."

Upon the question of repugnancy to the commerce clause, the court said:

"The judgment under controversy is clearly sustained by the decision of this court in *Savage v. Jones* (225 U. S. 501), which is precisely in point. . . . The requirements, the enforcement of which the bill seeks to enjoin, are not in any way in conflict with the provision of the federal act. They may be sustained without impairing in the slightest degree its operation and effect. There is no question here of conflicting standards or opposition of state or federal authority. It follows that the complainant's bill in this aspect of the case was without equity."

An attempt is made to distinguish *Savage v. Jones*, upon the ground that the Indiana statute there under consideration covered a field of regulation which had not been included in the federal statute, whereas,

it is said, the Kansas food and drugs law is almost literally a reproduction of the federal law upon the same subject.

"It is true that the Kansas statute, *mutatis mutandis*, follows quite closely the lines of the act of Congress, and that its eighth section, which defines the term "misbranded," is almost a copy of the corresponding section of the federal act; but in the following proviso at the close of the section the words italicized have been inserted by the state legislature, they not appearing in the federal act: 'And provided further, that nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods, which contain no unwholesome ingredients, to disclose their trade formulas, except so far as the provisions of this act, *or the rules and regulations of the State Board of Health*, may require to secure freedom from adulteration or misbranding.' These italicized words make a very substantial difference. Section 3 of the Kansas act provides that, 'The State Board of Health is authorized and directed to make and publish uniform rules and regulations, not in conflict with the laws of this state, for carrying out the provisions of this act'; and under this authority regulation 6 was adopted and published, which required manufacturers of certain proprietary foods, including syrups that are compounds, mixtures or blends to state definitely upon the principal label the percentage of each ingredient. It is insisted that the regulation goes beyond the authority conferred upon the state board because it is inconsistent with the definition of 'misbranding' contained in the act, and therefore cannot be deemed to be a regulation required to secure freedom from misbranding. Upon this particular point the opinion of the Kansas supreme court is silent; but the decision of the district court upon the demurrer sustained the validity of the regulation as being within the authority of the board. The supreme court did not overrule this. The question is one of state law, and we must assume that the regulation, having been adopted by the board and in effect sustained by the decision of the supreme court, is within the authorization of the statute. This being so, it must be treated as an enactment proceeding from the legislative power of the state; and hence it stands upon precisely the same basis as the requirement of the Indiana statute (quoted in 225 U. S. 504 and referred to above). . . . It was because of the absence from the federal act of a provision requiring the ingredients to be disclosed that this court held that Congress had limited the scope of its prohibitions and had not included that at which the Indiana statute aimed.

Maybe!

When cows fall ill the government proceeds to take alarm
And sends a veterinarian to sanitize the farm;
The cow herself is put to bed and plied with drugs and pills,
And Uncle Sam comes forward, when she's cured, to pay the bills.
But when a baby falls in need of medicine and care,
The government contends that that is none of its affair.
When pigs and lambs are threatened by a deadly pestilence
Their tender lives are guarded at the government's expense.
They're coddled, nursed and dieted until they're well and fat,
And never reckon of the cost—for Uncle Sam pays that.
But when an epidemic marks the babies for its own,
The government, untroubled, lets them fight it out alone.
Some day, perhaps, when all the pork has lavishly been passed,
When every scrap of patronage is handed out at last,
When all our noble congressmen have got all they desire,
And have attained whatever heights to which they may aspire—
To unknown heights of common sense the government will leap,
And do as much for mothers as it does for cows and sheep.

—Chicago Examiner.

Early Symptoms of Tuberculosis.

1. *Weariness.* Weariness is one of the earliest and commonest signs of the disease, especially important when it follows measles, influenza or physical or mental strain.

2. *Loss of Appetite.* Loss of appetite or "finicky" appetite, often associated with a dislike for such foods as butter, meats and fats.

3. *Loss of Weight.* Loss of weight, as not otherwise accounted for, should always arouse suspicion.

4. *Fever.* Very slight fever early in the afternoon or a temperature below normal in the morning. Any daily variation of more than one degree is significant.

5. *Cough.* The disease may become very far advanced without cough. It may amount to merely "clearing the throat." There may or may not be sputum. Any cough lasting more than two or three weeks, however slight, should arouse suspicion. The cough rarely "comes from the throat." So called "stomach cough" is often tuberculous.

6. *Shortness of Breath.* Shortness of breath, especially on slight exertion, may be an early symptom.

7. *Hoarseness.* Continued hoarseness or loss of voice merit serious attention.

8. *Indigestion.* One of the most common and earliest symptoms. A large percentage of cases of tuberculosis are first regarded as "stomach trouble." So called "nervous dyspepsia" should be looked upon with suspicion.

9. *Spitting Blood.* Hemorrhage from the mouth, however slight, is rarely due to any other condition than tuberculosis of the lungs. It is possible for the blood to come from the nose, teeth, gums or throat, but very improbable. In case of any hemorrhage, even slightly streaked sputum, the physician should be consulted.

10. *Pain in the Chest.* Soreness in the chest and so-called "pleurisy pains" are common early in the disease. Real pleurisy is frequently tuberculous. Moist pleurisy is almost invariably tuberculous.

11. *Nervousness.* Nervousness is very characteristic of the disease. Many cases of so-called "nervous prostration" are due to tuberculosis.

No one of the above symptoms means tuberculosis, but any one or more of them should cause the intelligent man to seek the advice of a thoroughly competent physician. He should not be satisfied with a superficial examination.—*Illinois Health News.*

Climate.

Climate has very little to do with the cure of consumption. It is fresh air and sunshine the patient needs, and both of these are obtainable in Indiana. It is usually a mistake for people to go away from home to another climate for the cure of consumption. If the person is rich, let him go if he wants to. He has money and can buy attention and all comforts wherever he is. It is very different with a poor person. He

lands sick and tired in a new land. His money is soon gone and he cannot work, and if he could, he will find scores of other unfortunates ahead of him. Presently—discouraged, worn out, with not enough to eat—he is overtaken with homesickness, and now his rapid decline begins. Homesickness alone is hard to bear, and when coupled with consumption the two always kill. Even if a consumptive is cured in Colorado or some foreign climate, he must remain where he is cured, for if he returns home he must again go through the acclimating process, and this generally starts up the old consumption. Doctors usually make a great mistake in recommending their consumptive patients to go to another climate. Doctors out West say: "Don't send your poor consumptive patients out here; they all go back in the baggage car."—*Indiana Health Circular*.

Vice Diseases.

It is only recently that we have come to appreciate the enormous influence of vice diseases in diminishing life expectancy, which does not stop with the individual, but extends its fatal shadow over his progeny. So rapid has been the recognition of the spread of venereal diseases within the last two decades that the malady syphilis has once more come to be, as it was in the dark ages, the captain of the men of death. Even tuberculosis, which has long held preëminence among the destroyers of men, must now take second place. It is believed ten percent of our population are affected by this disease, nearly one-third of whom have acquired the infection by innocent contact or through heredity.

If the disease continues to spread at the present rate it will not be long before civilization will be destroyed by syphilization, and the world will become thoroughly syphilized before its remoter corners have become civilized.

The old attitude of hypocritical silence must be abandoned, and the public must be educated and a public sentiment aroused which will demand of public officials that the same principles of isolation which are applied to smallpox and other communicable diseases shall also be applied to syphilis and gonorrhea.—*Good Health*.

Health Maxims for Mealtime.

1. Come to meals with clean hands.
2. Eat your meals with good cheer. Worry and grief retard the digestive processes.
3. Avoid extremes of temperature in eating. Do not take food and drink too cold or too hot. Ice water, if taken at all, should be drunk before the meal.
4. Eat bread and raw vegetables at the beginning of the meal—these stimulate the flow of gastric juice.
5. Chew your food thoroughly; your stomach has no teeth. Do not wash down unmasticated food with coffee, tea or other drinks.

6. Do not eat to excess. Normally your appetite should be an index of your wants.

7. Appetite and relish are important factors in promoting the flow of gastric juice. Hence, have the food prepared and served in an appetizing manner.

8. Do not eat meat, eggs and other proteins to excess.

9. If you have a feeling of distress or fullness after a meal, your diet or manner of eating needs regulating. If you suffer from belching or regurgitation, you should consult a physician for advice.

10. Do not engage in excessive physical or mental exertion immediately after a full meal.—*Chicago Bulletin*.

“The Song of the Fly.”

The Butterfly's a free-lance and the Bee a buccaneer,
And the Dragonfly's a pirate lurking in each hidden nook:
The Katydid's a gossip, clacking loud for all to hear,
But the Little Harmless Housefly—I'm the villain of the book.

My life begins in filth-piles which the shiftless men ignore;
I fatten on the loathesome mess until my wings appear;
Then out into the daylight, ubiquitous I soar,
With liberty unbounded on my murderous career.

I love to haunt the stable which they never think to screen,
Or spend a crawling hour in the open-work latrine,
Then hasten to the kitchen with a stimulated zest
And sample every dish to find which one I like best.

I feast in sick-room vessels, pause to taste a pool of spit,
Explore a pauper's festering sores, torment of mangy pup,
Then with my deathly freighted toes my whilom way I flit
To pantry or to dining hall or to a drinking cup.

I dabble o'er a carcass—its putrescence is a treat;
Then away to taste the sweetness of a sleeping baby's lip.
I'm an instrument of murder and my weapons are my feet,
For I leave my trail behind me wheresoe'er I pause to sip.

So childless breasts and aching hearts come stalking in my wake,
And graveyards yawn expectantly because men let me live;
From high and low, from rich and poor, my ghastly toll I take:
To age nor youth nor helpless babe no quarter do I give.

So it's ho! for hall and hovel—you may find me everywhere,
Man's menace from the moment when he draws his natal breath;
Created in a dunghill, yet I come to cleave the air—
The Special Agent of Disease—the Courier of Death.

N. C. Health Bulletin.

If venereal disease killed its victims promptly, like pneumonia, it would at least exert a selective influence on society as a whole. But its results are not often immediate fatalities, but rather a long list of secondary and far-removed effects, including insanity, locomotor ataxia, rheumatism, apoplexy, and degeneracy of offspring. It is a great thing that the government is no longer blind to this peril.

GRIEF.

My son was dead;
Blasted to fragments by the hellish guns.
I had not even sat beside his bed.
He lay, somewhere, one with the sodden earth.
Grass blades and gore
With chill dew touched his head—
And I was here!
So God forbore
To save my one, my dear;
And I lay low, and railed.
I had rejoiced so at his birth,
His growing, glowing boyhood, and at last
A man, and dead untimely; I had failed.
The past was past
And now there was no future. Then there came
A woman, and she sat there, brightly clad,
Yet was there shame
I had not, in my mourning; and her voice
Was lifeless, and I thought her mad
To say to me: "Rejoice!"
And then: "I had a son—
The call came, and he slunk away,
Craven, ease-loving, and I curse the day
I bore him; nay, I have no son.
Say I not well, 'Rejoice,' to you?"
And then another, and this woman cried:
"See, now, these arms are empty too.
You gave in pride;
My country asked and I had none to give.
I am the one who suffers, I
Who had no son to die!"
Then I turned soft, and asked God to forgive;
And thanked Him for my son, dead and alive.
—Almon Hensley.

BULLETIN

OF THE

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There was a man in our town,
And he was very wise,
He helped to keep the typhoid down
By swatting all the flies.
—N. C. Bulletin.

"All is not bliss that blisters."

Why not get vaccinated *now*?

The hidden menace—venereal disease.

Free typhoid vaccine to any citizen of Kansas.

The unvaccinated still continue to have typhoid fever!

"Swat the rooster" if you will produce eggs that will stand our summer climate.

The person who "waters" milk is the person who is not particular as to the safety of the water he adds.

WASHER LOST.

A Chink by the name of Ching Ling
Fell off of a street car—bing! bing!
The Con turned his head,
To the passengers said:
"The car's lost a washer"—Ding! Ding!

MORBIDITY REPORT FOR JUNE, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid..	Smallpox.....	Diphtheria.....	Scarlet Fever....	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenpox.....	Mumps.....	Pneumonia (acute lobar)...	Meningitis (epidemic).....	Polio-myelitis (epidemic).....	Influenza.....	Other Diseases (see Addenda).
THE STATE.....	48	343	54	97	70	0	71	115	74	15	2	2	32	348
Allen, except.....	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Iola.....	0	0	0	0	0	0	4	1	0	0	0	0	0	1
Anderson.....	0	4	0	0	0	0	0	0	1	0	0	0	0	1
Atchison, except*.....	0	19	0	12	0	0	0	1	0	0	0	0	0	0
Atchison city.....	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Barber.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Barton, except.....	0	0	0	1	0	0	0	1	1	0	0	0	0	0
Great Bend.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except.....	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Fort Scott.....	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Brown.....	0	0	0	2	3	0	0	0	0	0	0	0	0	1
Butler, except.....	0	9	0	0	0	0	1	1	1	0	0	0	0	1
Augusta.....	0	0	0	7	0	0	0	0	7	0	0	0	1	0
Eldorado.....	1	8	1	1	0	0	0	5	0	1	0	0	0	0
Chase.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chautauqua.....	0	0	0	0	0	0	3	1	0	0	0	0	0	0
Cherokee, except.....	0	1	0	0	0	0	0	0	1	0	0	0	0	2
Galena.....	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Cheyenne.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Clark.....	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Clay.....	0	0	2	1	0	0	0	0	0	0	0	0	0	0
Cloud, except.....	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Concordia.....	0	0	0	2	0	0	0	0	0	0	0	0	0	1
Coffey.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comanche.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except.....	0	1	0	1	0	0	0	1	0	0	0	0	0	0
Arkansas City.....	0	3	0	6	0	0	0	1	0	0	0	0	0	0
Winfield.....	0	0	0	0	1	0	5	1	0	0	0	0	0	0
Crawford, except.....	1	22	1	0	0	0	6	2	2	0	0	0	0	1
Pittsburg.....	1	5	0	0	0	0	0	1	0	0	0	0	0	0
Decatur.....	1	0	0	2	1	0	0	0	0	0	0	0	0	0
Dickinson.....	0	0	1	8	0	0	0	1	0	1	0	0	0	0
Doniphan.....	0	6	5	0	0	0	0	0	0	1	0	0	0	0
Douglas, except.....	0	1	0	1	0	0	0	2	0	1	0	0	0	0
Lawrence.....	1	0	0	0	0	0	0	0	0	3	0	0	0	0
Edwards.....	0	3	0	0	0	0	0	0	0	0	0	0	0	1
Elk.....	1	0	0	0	0	0	0	0	2	0	0	0	1	0
Ellis.....	1	0	0	0	13	0	0	1	0	0	0	0	3	0
Ellsworth.....	0	0	0	1	0	0	0	0	0	0	0	0	0	4
Finney.....	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Ford, except.....	0	3	2	0	0	0	0	0	1	0	0	0	0	1
Dodge City.....	0	0	0	3	1	0	3	0	4	0	0	0	0	0
Franklin, except.....	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa.....	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Geary, except*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Junction City.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove.....	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grant.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Greeley*.....	0	0	0	5	0	0	0	0	0	0	0	0	0	3
Greenwood.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton.....	0	0	0	0	0	0	7	0	1	0	0	0	0	2
Harper.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harvey, except.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Newton.....	0	14	0	0	0	0	0	0	1	0	0	0	0	0
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson.....	0	1	0	1	0	0	0	0	0	0	0	0	16	1
Jefferson.....	0	11	0	0	0	0	0	2	0	0	0	0	0	0
Jewell.....	0	0	0	1	1	0	2	0	2	0	0	0	0	0
Johnson*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kearny.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman.....	2	0	0	0	0	0	3	0	1	0	0	0	0	2
Kiowa.....	0	0	0	0	0	0	0	1	12	0	0	0	0	1
Labette, except.....	0	1	0	1	0	0	2	0	0	0	0	0	0	0
Parsons.....	1	9	0	1	1	0	0	1	1	0	0	0	1	12
Lane.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except.....	0	3	1	1	1	0	0	1	0	1	0	0	0	0
Leavenworth city.....	1	5	3	0	0	0	0	12	0	0	0	0	0	0

MORBIDITY REPORT FOR JUNE, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.....	Diphtheria.....	Scarlet Fever....	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenpox.....	Mumps.....	Pneumonia (acute lobar)...	Meningitis (epidemic)....	Polio-myelitis (epidemic)....	Influenza.....	Other Diseases (see Addenda)
Lincoln.....	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Linn*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion.....	2	0	0	0	1	0	0	1	3	0	0	0	0	0
Marshall.....	1	3	0	0	1	0	4	4	2	1	0	0	0	0
McPherson.....	0	0	0	0	2	0	0	0	0	0	0	0	0	1
Meade.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Mitchell.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Montgomery, except Coffeyville.....	0	0	0	0	0	0	0	3	4	0	0	0	0	2
Independence.....	3	2	0	2	0	0	0	2	1	0	0	0	0	4
Morris.....	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Morton.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha.....	0	0	1	3	0	0	0	0	1	0	0	0	0	0
Neosho, except Chanute.....	1	6	0	0	0	0	0	0	0	1	0	0	0	0
Ness*.....	0	11	1	3	2	0	0	0	0	0	0	0	0	0
Norton.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osborne.....	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa*.....	1	0	0	0	1	0	3	0	0	0	0	0	0	3
Pawnee.....	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Phillips.....	0	0	2	2	0	0	0	0	0	0	0	0	0	0
Pottawatomie.....	1	2	0	1	0	0	0	1	0	0	0	0	0	0
Pratt.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Rawlins.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson.....	0	0	0	0	0	0	0	2	0	0	0	0	0	1
Republic.....	0	4	0	0	0	0	0	10	0	0	0	0	0	8
Rice.....	0	1	0	0	0	0	0	5	1	0	0	0	0	0
Riley, except Manhattan.....	0	0	2	0	0	0	4	0	1	0	0	0	0	3
Rooks.....	1	1	0	1	0	0	7	3	0	1	0	0	0	2
Rush.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except Salina.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Scott*.....	0	4	0	0	0	0	0	0	5	0	0	0	0	5
Sedgwick, except Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seward.....	2	110	3	0	3	0	3	20	4	0	0	0	3	71
Shawnee, except Topeka.....	0	0	1	2	0	0	0	0	0	0	0	1	0	0
Sheridan.....	2	12	6	5	1	0	0	9	5	0	0	1	0	51
Sherman.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith.....	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Stafford.....	0	1	0	1	0	0	0	0	1	0	0	0	0	0
Stanton*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens.....	0	5	0	0	0	0	0	1	0	0	0	0	0	1
Sumner, except Wellington.....	1	2	0	2	0	0	3	0	1	0	0	0	0	0
Thomas.....	0	0	0	0	0	0	5	0	0	0	0	0	0	1
Trego*.....	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Wabaunsee.....	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Wallace*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita.....	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	3	0	2	0	0	0	0	0	0	0	0	0	0	0
Woodson.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except Kansas City.....	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Reeddale.....	5	7	11	1	29	0	2	6	1	1	1	0	3	34
	0	0	0	0	0	0	0	0	0	0	0	0	0	62

ADDENDA.

* No report.

Other Communicable Diseases: Cancer, 7; Chancroid, 1; Erysipelas, 3; Gonococcus Infection, 208; Malaria, 1; Pellagra, 1; Syphilis, 123; Tetanus, 1; Trachoma, 7.

Venereal Disease in Kansas.

There were 3,097 cases of venereal disease reported from July 1, 1918, to June 30, 1919. While this represents but from 10 to 20 percent of the total number of cases in all probability, yet the number is sufficiently large as to fairly represent the age groups and social relations of the incidence of the disease in Kansas. It should be noted that there were 38 cases of gonorrhea and 20 cases of syphilis in *children* under fifteen years of age. These figures multiplied by ten will approximate the actual number of cases among our Kansas children. Will those who are so strenuously opposing the educational work among high-school boys and girls on the theory they are too young please hold up both hands!

Age.....			0 to 15.		16 to 20.		21 to 30.		31 to 45.		46 and over.		Totals.	
			Gon.	Syph.	Gon.	Syph.	Gon.	Syph.	Gon.	Syph.	Gon.	Syph.	Gon.	Syph.
MALE	WHITE	Single....	5	4	357	55	579	101	170	83	34	52	1,145	295
		Married..	0	0	16	2	242	52	188	88	31	39	477	180
	COLORED	Single....	3	1	38	7	36	17	12	9	3	5	92	39
		Married..	0	0	1	2	17	13	12	22	2	4	32	41
FEMALE	WHITE	Single....	27	10	89	25	66	25	27	8	3	4	212	72
		Married..	1	1	64	23	131	62	48	42	10	15	254	143
	COLORED	Single....	1	4	8	7	9	8	1	13	0	2	19	34
		Married..	1	0	10	2	15	20	2	9	1	2	29	33
		Totals..	38	20	583	123	1,095	298	480	274	84	122	2,260	837

Chancroid, 47. Gonorrhea and Chancroid, 2. Gonorrhea and Syphilis, 12.

Even Mules Are Particular.

A chaplain, on making his rounds in the base hospital of a large cantonment, stopped at the cot of a darky and said:
"Sam, how is it that you are in bed today? You were quite well when I spoke to you yesterday."
The darkey replied: "Well, Pahson, Ah done was kicked by a mule."
"What in the name of goodness did he kick you for?"
"Ah guess Ah done fo'got to salute."

Moving Picture of a Rude Awakening of a Board of County Commissioners.

SCENE: County Commissioners' Office. Present: Commissioners, Attorney, Clerk and Health Officer. Health Officer presents letter from State Board of Health calling his attention to law requiring inspection of school houses.

Chairman: "None of the other health officers have ever made any such inspection, and we are not going to allow any pay or expense for them this year. Just you forget that letter."

Health Officer: "Then I understand it is your directions that these inspections be not made."

Chairman: "That's just about the size of it."

[Same office six months later. Present: Commissioners and Attorney.]

Chairman: "See here, Mr. Attorney, what kind of a joke is this lawyer Martin playing—springing this suit on us because Cyrus Brown's boy died of typhoid fever?"

County Attorney: "It does look like a joke, but I had a talk with Martin last night and he is not joking."

Chairman: "Do you mean to tell me he can put us to the trouble of going into court because a boy died of typhoid fever in this county?"

Attorney: "Fact is, Mr. Chairman, this case isn't so mighty simple. You see the County Health Officer is made a party to the suit, but I had a talk with him last night and he reminds me that last June when he presented a letter from the State Board of Health, calling his attention to the law requiring that inspections of school houses be made, you directed him not to make such inspections, so I guess he is going to clear himself. I was here when you made the order and will have to support the doctor this time."

Chairman: "But why didn't you tell us that the law required that we have such inspections made?"

Attorney: "The letter from the State Board of Health called your attention to an opinion of the Attorney General to the effect that such inspection was mandatory and not optional, so you had all the legal notice you needed. I don't propose to assume any of the responsibility in this case. Of course I will defend the case, but it doesn't look very promising."

Chairman: "How on earth do you figure that we are in any way responsible for this boy's death?"

Attorney: "Well, it is this way. Martin told me some days ago that the suit would be filed and I have looked the matter up some. There is no question but that it is the duty of the health officers to make such inspection. It is also the duty of the commissioners not only to pay a reasonable fee for such work, but to actually see that it, as well as the other duties of the health officers, is done. It seems that the State Board of Health has investigated an outbreak of typhoid fever in the school at ——— and found that it came from the water used at the school, that the well was polluted from the toilet and that the toilet was so located as to pollute the well at the time inspection should have been made by the

health officer. Brown tells me that the State Board of Health is ready to testify that had inspection been made during the summer vacation, as required by law, this condition would have been detected and the health officer (if he did his duty) would have ordered the School Board to correct the condition. Had this been done and the school board had failed to correct the condition the responsibility would have been on them, but as it is, the responsibility is directly on you, as a county board of health. And that isn't all; there were nine other cases of typhoid fever developed in that school as a result of the bad water and if Brown wins his case, suits for damages will be brought in each of the other cases.

Chairman: "Do you mean to tell me that you think there is a chance on earth that they can make us pay for that boy's death?"

Attorney: "Of course we will fight to the highest courts, but there are several decisions where water companies have been made to pay heavy damages for just such neglect, and Martin argues that the conditions are quite similar. Candidly, the case looks very doubtful to me."

Chairman: (to other members of board): "See here, fellows, if this is not a joke it seems to me that we had better hire some mighty good lawyer to help out the County Attorney in this case."

[Six months later. Same office, same audience.]

Attorney: "Well, the jury found for the plaintiff and allowed \$10,000 damages and costs. Of course, we will appeal to the Supreme Court but I find very few faults in the trial on which to base an appeal."

Three months later Supreme Court supports findings of lower court. Nine suits for \$1,000 damages have been filed by nine fathers whose children contracted typhoid fever from the same well. The Commissioners are not broke, but they are badly bent, and are ready to admit that there are responsibilities attached to the office of county commissioner other than looking after the roads and spending as little as possible on everything in the county except roads.

Morbidity Notes.

During the last six months all reportable diseases have run below the average for the last five years. Nevertheless, there has been a constant presence of all these diseases, supplying a source of infection that will become active as soon as school opens, unless active measures are taken to prevent it. There has been quite a marked prevalence of mild scarlet fever. Many cases have undoubtedly not had a physician and have not been reported. These cases will go to school without disinfection and some of them will be in the infectious stage. It, therefore, behooves the teachers to be on the lookout for suspicious cases, if they hope to avoid having their schools closed on account of epidemic conditions.

AN UNRECOGNIZED EPIDEMIC OF SCARLET FEVER.

One of the public health nurses reports the following interesting condition: She had been making examination of school children in the schools of one of our counties. In one school she found a greatly increased number of bad throats, enlarged tonsils, running ears, etc. On

questioning the parents the same reply was invariably forthcoming: "Oh yes, his throat has been bad ever since he had a sore throat with a little eruption three months ago." One child showed evidence of being badly run down. Examination by a physician showed that the child had acute kidney disease, from which it died a few weeks later. Several of the children had discharging ears. Practically every child in the school showed evidence of having had a severe throat trouble. Practically every one, on being questioned by the nurse admitted that when the throat was sore he or she had an eruption for a few days. What better picture of scarlet fever would one want? No doctor was called in any of these cases, but we suspect that at least some of these parents had a pretty clear idea as to what the real trouble was. The health officer in this county was probably "resting assured."

DELINQUENT WEEKLY REPORTS.

From the first of January to the first of July we have had an average of thirty-nine health officers each week whose report was received late, or not at all. The law requires that a report of communicable diseases be mailed Saturday of each week. In April we wrote letters to a number of these delinquent health officers. Some of them have done better; some have done nothing and a few wrote us that "If we did not have a report from them we could rest assured that there was nothing to report." These health officers are laboring under a misapprehension, for we will not only not "rest assured," but we will not rest at all until we have prompt and complete reports from every health officer in the state. The fact that we do not receive a report from a health officer does not assure us that he has nothing to report, but it does cause us to believe that he himself is "resting assured" that there is nothing to report instead of finding out. Such health officers not only "rest assured" but probably "rest" all the time, so far as action pertaining to their official position goes.

WORTHLESS REPORTS.

Sometimes health officers make prompt reports that have little value. These health officers usually send in "no case" reports. We have the evidence on several but will only mention one at this time. Last week we received a "no case" report from a county health officer. Inquiry of him brought out the fact that he had overlooked a report of infantile paralysis. We believe that a search of his desk would reveal several other cases that were "overlooked." This case would never have been reported had the attending physician not asked our epidemiologist to see the case. The physician assured him the case had been reported to the health officer two days before, hence the inquiry of the health officer. Not only did the health officer fail to report the case, but he did absolutely nothing about it. When our epidemiologist saw it, he found the room unscreened and two children running in and out of the sick room. Two children (different families) were visiting at the house when the child was taken sick. These children had been taken home, one of them to a large city and no precaution whatsoever was being taken to prevent the spread of disease if they should become sick with infantile paralysis. Is there any wonder we have epidemics when such a serious disease is treated so lightly by public officials?

Doctors and Birth Reports.

By CHARLES H. IERRIGO, *State Registrar.*

One of the things that the A. E. F. learned about doctors was that very few of them could write their own names clearly enough to be read when the writing was cold. There were two measures of correction taken. One of them was to typewrite the name first and then sign over the typed signature. The other was to print all names in capitals.

As I look over the certificates of birth and death sent in by the Kansas doctors I am bound to admit that a course of training in A. E. F. methods of writing names would be a most excellent thing. I would like to be able to take some of our doctors aside and reason with them after this fashion: "Look here, as an up-to-date doctor you know the great value of birth registration. Do you realize the injustice to your patient when you scrawl his name on the certificate in such a way that the clerk is uncertain whether it is intended for 'Smith,' 'South,' 'Louth' or 'Looth,' as happened this day? If the illegibility of the certificate causes it to be improperly indexed, it loses its value as a record and you have done to that innocent baby, too little to know that his rights are being violated, an injury that you would be very quick to resent were your own child the victim."

Some doctors have peculiar conceptions of what constitutes the "Full name of child." In a report received this morning the attending physician writes, happily, the letters "J. B. jr." and evidently thinks that he has performed his whole duty; for, of course, the father's initials being J. B. the thing should be clear enough to anyone, even a registrar. A moment's reflection must convince any thinking person, however, that initials are quite out of place in making the very first official record of the appearance of a totally new citizen of Kansas. And not only should the Christian names be written in full, but it is also to be borne in mind that the surname is a part of the "full name of child" also.

Doctors seem to differ widely in the success that they have in inducing parents to name their infants promptly, so that the full names can be included on the first returns. One doctor, who reports a great many births, is one hundred percent successful in supplying the child's name with the initial report. He is the type of successful physician that is looked up to with such respect that parents will act promptly, if only to accommodate him. It is our observation that the doctors of experience seldom fail to make complete returns. Waiting several days for parents to name the child is usually unnecessary, and it adds to your work to the extent of making out a supplemental report.

As one who has attended many births and made many reports of them may I suggest a few helpful principles?

1. Carry a pad of birth reports in your obstetric bag.
2. Preparing the birth certificate falls nicely into the little season of relief, when, everything over, you are giving your congratulations to the happy parents, offering a final word of advice, and perhaps arranging for the settlement of your account. Both parents are usually present and can easily be induced to agree upon a name.
3. Parents are glad to see you in the act of making the important record. They are always eager to assist. If they simply cannot decide on a name, insist upon their telephoning the decision in twenty-four hours.

4. Every item of the certificate is important and so is your signature. Do not neglect the "number of children born to this mother."
5. The "Twin, triplet or other" and "Number in order of birth" are to be left blank if not more than one child is delivered.
6. All living children are to be reported as "born alive."
7. Stillbirths in which foetal development indicates that the infant has passed the twenty-eighth week of intrauterine life must be reported both as to birth and death.
8. Write certificate in black ink or on the typewriter.
9. To be certain of accurate record, print name of child in capitals.

Her Baby Died.

The hour for the funeral had arrived and neighbors were coming in to the services. The dead baby lay in a little white coffin lined with white satin, was dressed in white, and flowers in profusion decorated the room and testified to the sympathy of the neighbors.

The preacher made a short prayer, uttered a few comforting words, a song was sung, the little baby was borne to the white hearse by four young girls in white, and the procession moved toward the cemetery.

The baby had died from intestinal disorder induced by wrong feeding, yet the preacher said—"The Lord giveth and the Lord has taken away." The doctor told how it all happened. "That baby," said he, "was born strong and healthy. The mother nursed it for weeks, but finding that nursing interfered with bridge parties and other social affairs provided a bottle, and when she was absent, her aunt who lived with her, fed cow's milk. This irregularity of breast feeding soon lessened the amount of the mother's milk and she concluded she would cease nursing entirely. The child seemed to do well on the bottle for a while, but it soon became evident that something was wrong. One time I saw the mother give a piece of rich pie crust to her baby and I warned her against doing so. She told me she found the infant liked coffee and a little was frequently given to it. And so despite my medicines and my warnings in regard to feeding, the child's digestive apparatus gradually broke down. An old grandmother told the mother that it was natural for babies to throw up. Another one prescribed soothing syrup which contained morphine. Another one recommended anise seed cordial, and so it went; the young mother being willing to depend upon drugs and remedies but would not practice prevention by feeding rationally. When the digestive machinery was put to the bad the baby finally took dysentery and died." Continuing, the doctor said, "I had three infants die of pneumonia last winter, simply because the mother would not give them air enough. In spite of my instructions that plenty of air made babies strong and protected them against colds and coughs, still they would cover their babies' faces with veils and napkins keeping the life-giving air away. The foolish idea," said the doctor, "which seems to exist everywhere, that fresh, cold air is injurious, must be somehow extracted from the minds which hold the same or else pneumonia dead babies will always be with us."—*Indiana State Board of Health.*

Rejections in the Draft and Their Causes.

Those who wish information on the rejections in the draft and their causes will find interest in the statistics in the paragraphs below. They are published in the Journal of the American Medical Association, for April 12, 1919:

According to the first and second reports of the Provost Marshal-General, the total number of registrants under the first draft was 9,586,508, of which 2,510,706 were given physical examinations, 1,779,950 or 70.89 percent, were accepted, and 730,756, or 29.11 percent, were rejected. In the second draft, the total number of registrants was 9,952,735, of which 3,208,446 were examined. Of these 2,259,027, or 70.41 percent, were accepted, and 949,419, or 29.59 percent, were rejected. In the two drafts, therefore, 19,539,243 men were registered. Of these, 5,719,152 were examined, of whom 4,038,977, or 70.65 percent, were accepted, and 1,680,175, or 29.35 percent, were rejected for physical reasons.

No complete tabulation has as yet been published regarding the causes for rejection. Partial reports on small groups of rejections show that out of 10,000 rejections, 2,224, or 21.68 percent, were for defective vision; 871, or 8.5 percent, for defective teeth; 766, or 7.47 percent, for hernia; 609, or 5.94 percent, for defective ears; 602, or 5.87 percent, for heart disease; 551, or 5.37 percent, for tuberculosis; 465, or 4.53 percent, for mental defects; 438, or 4.37 percent, for venereal diseases; 416, or 4.06 percent, for physical undevelopment; and 387, or 3.77 percent for nervous diseases, with numerous other defects contributing from 1 to 2 percent. —*The Minnesota Public Health Association Journal.*

The Southwestern Conference.

The Southwestern Tuberculosis Conference will be held at the Hotel Virginia, Long Beach, Cal., October 1, 2 and 3, 1919, under the auspices of the National Tuberculosis Association.

This Conference includes the states of Arizona, California, Colorado, Kansas, New Mexico, Oklahoma and Texas and the purpose of the meeting is to afford the opportunity for an exchange of ideas regarding the various public health and tuberculosis problems encountered in these states and how they can best be met.

This year's officers of the Conference are:

President—Dr. Robert A. Peers, Colfax, Cal.

Vice-Presidents—Arizona, Dr. Jeremiah Metzger, Tuscon; California, Dr. C. C. Browning, Los Angeles; Colorado, Dr. Gerald B. Webb, Colorado Springs; Kansas, Dr. S. J. Crumbine, Topeka; New Mexico, Mrs. A. Otero-Warren, Santa Fe; Oklahoma, Mr. E. K. Gaylord, Oklahoma City; Texas, Mr. J. D. Harper, Dallas.

Secretary—Mrs. E. L. M. Tate-Thompson, Fresno, Cal.

Program Committee—John Tombs, regional secretary, National Tuberculosis Association, Albuquerque, N. M.; Mrs. E. L. M. Tate-Thompson, executive secretary California Tuberculosis Association, Fresno, Cal.; Dwight E. Breed, executive secretary, Texas Public Health Association, Austin, Tex.

Baby Hands.

Baby Hands! In all the world there is nothing half so strong; in all the world there is nothing half so pure. It seems at times as if God created babies that weary men and women might not abandon faith in Him.

What tongue can tell, what pen can describe what a baby means? Everything that is holy, that is beautiful, that is good, clusters around a baby. Its tiny hands fasten around our hearts with a mighty grip that nought but death can loosen, and men and women are nearest God when they kneel at a baby's feet. No man may ever know the thoughts of a mother as she bends over the babe for whom she went down into the valley of the shadow. A halo ever rests over mother and infant, as if they had caught something of the radiance of another world as they lingered at the eternal gates.

Every baby is a completed miracle, and is so priceless that kingdoms are worthless in the balance.

In that wee form is wrapped up the hopes, the ambitions, the illusions, if you will—and our illusions are often the most precious things we have—of a man and woman. For that morsel of humanity a woman has paid a terrible price and a man has pledged his honor and life. All that we have fought for, all that we have believed in, all that countless generations have fought for and believed in, the blood of martyrs and the heroes, the anguish of the oppressed and the tears of the slaves, all that our civilization means and all that we hope it will mean, rests with our babies. It was for them the millions who have gone before strove; it is for them that we must strive if we are men.—*From the Seattle Daily Star.*

No Wonder She Remembered.

"It's four years now since he left me," said the deserted wife. "I remember it just as well as yesterday—how he stood at the door, holding it open till six flies got into the house.—*Boston Transcript.*

Not By Scales.

Customer: Those are queer scales you have there. I suppose they are of the Ambuscade kind.

Grocer: The Ambuscade kind?

Customer: Yes; they lie in weight, so to speak.—*Record.*

The New Baby.

"If we lived in former times, this baby of ours, my dear, could have filled an important town position."

"What is that?"

"Town crier."

**Report on Samples of Milk Collected in Lawrence, Kansas,
in July, 1919.**

(Brought in by City Milk Inspector.)

1088. Katherman. Dirt present. Fat, 4.8 percent. *B. coli*, 100. Total bacterial count, 50,000.

1089. Chamney. Dirt, negative. Fat, 2.8 percent. Solids not fat, 8.2 percent. *B. Coli*, 1,000. Total count, 4,000.

1090. Messenheimer. Fat, 4.6 percent. *B. coli*, none. Total bacterial count, 20,000.

1091. Fritzell. Dirt present. Fat, 3.4 percent. *B. coli*, 100. Total bacterial count, 150,000.

1092. H. Brown. Fat, 3.2 percent. No dirt present. Total bacterial count, 20,000. No *B. coli* present.

1093. Hawkins. Dirt present. Fat, 2.6 percent. *B. coli*, 100. Total bacterial count, 200,000.

1094. Kahn. Dirt present. Fat, 3.4 percent. Solids not fat, 7.5 percent. *B. coli*, 1,000. Total bacterial count, 850,000.

1095. Gehert. Fat, 4.8 percent. *B. coli*, 100. Total bacterial count, 100,000.

1096. Gehert. Fat, 2.4 percent. Solids not fat, 8.2 percent. *B. coli*, 100. Total bacterial count, 400,000.

1097. Long. Fat, 5.10 percent. Dirt, none. Total bacterial count, 3,000.

1098. Chamney. Fat, 3.25 percent. No dirt present. *B. coli*, 100. Total bacterial count, 50,000.

1099. Kelley. Fat, 2.6 percent. Dirt present. *B. coli*, 1,000. Total bacterial count, 1,300,000.

1100. White. Fat, 4.1 percent. Dirt present. *B. coli*, none. Total bacterial count, 130,000.

1101. Stearnes. Fat, 2.2 percent. Dirt present. *B. coli*, 100. Total bacteria, 50,000.

1102. Perry. Fat, 6.8 percent. No dirt present. *B. coli*, none. Total bacterial count, 60,000.

1103. Mason. Fat, 3.7 percent. No dirt present. *B. coli*, 100. Total bacterial count, 50,000.

1104. Winchell. Fat, 3.6 percent. Dirt present. *B. coli*, none. Total bacterial count, 12,000.

1106. Gehert. Fat, 3.85 percent. Dirt present. Solids not fat, 7.89 percent. Watered. *B. coli*, 100. Total bacterial count, 120,000.

1107. Miller. Fat, 4.3 percent. No dirt present. *B. coli*, 1,000. Total bacterial count, 220,000.

1106a. Owens. Fat, 3.8 percent. No dirt present. *B. coli*, 100. Total bacterial count, 15,000.

1107a. Starnes. Fat, 2.0 percent. No dirt present. *B. coli*, 100. Total bacterial count, 85,000.

1108. Hook. Fat, 2.8 percent. No dirt present. *B. coli*, none. Total bacterial count, 8,000.

1109. Hawkins. Fat, 4.6 percent. Solids not fat, 7.91 percent. Dirt present. *B. coli*, 100. Total bacterial count, 50,000.

1110. Kelly. Fat, 2.8 percent. Dirt present. *B. coli*, 10,000. Total bacterial count, 500,000.

1111. White. Fat, 3.7 percent. Dirt present. *B. coli*, none. Total bacterial count, 10,000.

1112. Dalton. Fat, 5.6 percent. Dirt present. *B. coli*, none. Total bacterial count, 5,000.

1113. Starnes. Fat, 2.9 percent. *B. coli*, 100. Total bacterial count, 5,300,000.

1115. Smith. Fat, 2.5 percent. Dirt present. *B. coli*, 10,000. Total bacterial count, 3,500,000.

1116. Smith. (Cream.) Fat, 17.5 percent. Very dirty. *B. coli* present, 1,000. Total bacterial count, 7,500,000.

ICE CREAM.

1137. Busy Bee. Fat, 13.5 percent. *B. coli*, 100. Total bacterial count, 140,000.

1138. Busy Bee. Vanilla. Fat, 14.5 percent. *B. coli*, 100. Total bacterial count, 60,000.

1139. Von's Vanilla. Fat, 16.0 percent. *B. coli*, 100. Total bacterial count, 1,450,000.

1140. Olympia. Vanilla. Fat, 15.0 percent. *B. coli*, 100. Total bacterial count, 1,100,000.

1141. Hatfield. Chocolate. Fat, 13.0 percent. *B. coli*, 100. Total bacterial count, 50,000.

1142. Olympia. B. B. Fat, 16.5 percent. *B. coli*, 100. Total bacterial count, 500,000.

1143. Von's Chocolate. Fat, 14.0 percent. *B. coli*, 100. Total bacterial count, 2,200,000.

1144. Hatfield. Strawberry. Fat, 15.0 percent. *B. coli*, 100. Total bacterial count, 1,220,000.

1145. Boston. Fat, 17.0 percent. *B. coli*, 100. Total bacterial count, 100,000.

1146. K. U. Fat, 16.0 percent. *B. coli*, 1,000. Total bacterial count, 300,000.

1147. Wiedemann. Strawberry. Fat, 14.0 percent. *B. coli*, none. Total bacterial count, 50,000.

1148. Boston. Strawberry. Fat, 14.0 percent. *B. coli*, none. Total bacterial count, 330,000.

1149. Wiedemann. Vanilla. Fat, 18.0 percent. *B. coli*, 100. Total bacterial count, 8,000.

Food Analysis LXIII.

E. H. S. BAILLY, Director Food Laboratory; W. S. LONG, Chemist in Charge.

AUGUST 1, 1919.

BEVERAGES.

252. "Orange Julep Syrup." Southern Fruit Julep Co., Fort Worth, Tex.; Atlanta; Chicago. Retailer, Baughman Bros. & Co., Topeka, Kan. Illegal.

253a. "Levitt's Pure Orange Juice." Jobbers, Heinly & Kanoff, Topeka, Kan. Retailers, J. J. Carter, Topeka, Kan. Passed.

22732. "Nearo." Manufacturer, Dick Bros., Quincy, Ill. Brought in by Inspector Rowland. Alcohol, 0.81 per cent.

81194. "Cream" Soda Pop. Retailer, J. F. Makinney, Columbus, Kan. Passed.

81195. "Ginger" Soda Pop. Retailer, J. F. Makinney, Columbus, Kan. Passed.

81196. "Orange Crush." Manufacturer, Orange Crush Co., Chicago. Retailer, J. F. Makinney, Columbus, Kan.

81201. "Soda Water." Retailer, Coca-Cola B. W. Co., Pittsburg, Kan. Passed.

81202. "Orange Pop." Coca-Cola B. W. Co., Pittsburg, Kan. Passed.

81203. "Grape Mash" Pop. Coca-Cola B. W. Co., Pittsburg, Kan. Passed.

81204. "Liquid Iron" Pop. Coca-Cola B. W. Co., Pittsburg, Kan. Passed.

81205. "Lemon" Pop. Coca-Cola B. W. Co., Pittsburg, Kan. Passed.

81206. "Lemon Sour" Soda. Pittsburg Steam Bottlers, Pittsburg, Kan. Passed.

81207. "Grape Soda." Pittsburg Steam Bottlers, Pittsburg, Kan. Passed.

81208. "Lemon Sweet" Soda. Pittsburg Steam Bottlers, Pittsburg, Kan. Passed.

81209. "Strawberry" Soda. Pittsburg Steam Bottlers, Pittsburg, Kan. Passed.

CAKE MIXTURE.

22727. "Devil's Food, Excelo Cake." Manufactured by E. C. Gatlin & Co., Kansas City, Mo. Retailer, S. B. Lawrence, Grocery Co., Lawrence, Kan. Passed.

CATSUP.

254. "Griffon Brand" Catsup. Heinly & Kanoff, Topeka, Kan. Passed.

VINEGAR.

60721. "Square Deal" Vinegar. Manufacturers, Great Western Preserving Co., Kansas City, Mo. Retailers, W. H. Rauth, Kansas City, Kan. Acidity, 3.66. Color, caramel. Illegal.

60722. "Pure Juice" Cider Vinegar. Manufacturer, Yancy Cider and Vinegar Co., St. Louis, Mo. Retailer, D. W. Morey, Kansas City, Kan. Passed.

I'd Rather Go Fishing.

I'd rather go fishing than be a King,
For the life of a monarch's a troubled thing—
He loses his throne on rebellion's tide,
When traitors along with his soldiers ride,
And he never knows when the slip of a knife
May end all his troubles along with his life!
Oh, a monarch's a terribly troubled thing,
And I'd rather go fishing than be a King!
I'd rather go fishing than anything—
Than rolling in money or being a King;
For out where the water is full of fish,
There's nothing on earth that a chap could wish!
No joy quite compares with the joy of a hike
To the river or lake for the feel of a strike—
As for rolling in money or being a King,
I'd rather go fishing than anything!

—*Southern Homeseeker.*

At the annual meeting of the Kansas State Board of Health, held June 26, 1919, the following rules and regulations were unanimously adopted, in accordance with the provisions of section 1, for the enforcement of chapter 296, Laws of 1911, entitled "An act to provide for the immediate registration of all births and deaths throughout the state of Kansas," etc.:

REGULATION 23.

PREMATURE STILLBIRTHS.

For purposes of reporting and issuing of certificates of birth and of death, the term stillbirth shall be applicable to any delivery of a dead infant or foetus, the development of which indicates that it has passed the 28th week of uterogestation. Certificates for such births and deaths shall be issued as instructed in Regulation 6.

REGULATION 24.

CERTIFICATES TO BE WRITTEN IN INK.

Certificates of death shall be written plainly in black ink, unless written on typewriter. These certificates are a permanent record. The local registrar shall not issue a burial permit until a legible and satisfactory certificate of death, properly written in ink or on typewriter, is presented.

Certificates of birth shall likewise be legibly written in black ink or on typewriter.

This is to certify that these regulations were unanimously approved and adopted by the State Board of Health at a meeting held June 26, 1919.

S. J. CRUMBINE, M. D., *Secretary.*

Published July 1, 1919.

OUT FISHIN'.

A feller isn't thinkin' mean,
 Out fishin';
His thoughts are mostly good and clean,
 Out fishin';
He doesn't knock his fellow-men
Or harbor any grudges then;
A feller's at his finest when
 Out fishin';

The rich are comrades to the poor,
 Out fishin';
All brothers of a common lure,
 Out fishin';
The urchin with the pin and string
Can chum with millionaire and king,
Vain pride is a forgotten thing—
 Out fishin';

A feller gits a chance to dream,
 Out fishin';
He learns the beauties of a stream,
 Out fishin';
An' he can wash his soul in air
That isn't foul with selfish care,
An' relish plain and simple fare—
 Out fishin';

A feller has no time for hate,
 Out fishin';
He isn't eager to be great,
 Out fishin';
He isn't thinkin' thoughts of pelf,
Or goods stacked high upon the shelf—
But he is always just himself,
 Out fishin';

A feller's glad to be a friend,
 Out fishin';
A helpin' hand he'll always lend,
 Out fishin';
The brotherhood of rod and line,
An' sky an' stream, is always fine;
Men come real close to God's design,
 Out fishin';

A feller isn't plottin' schemes,
 Out fishin';
He's only busy with his dreams,
 Out fishin';
His livery is a coat of tan,
His creed: to do the best he can;
A feller's always mostly man,
 Out fishin'.

—Cannery Notes.

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

August, 1919

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Keep to the right!
Look well to your well!
The vaccinated are unafraid.
Eat more fruit and vegetables.
Change them with the weather!
The way to prevent is to vaccinate.
When in doubt, boil the water and get vaccinated.
Honest, now—how many and how big were they?
"The fool hath said in his heart," there are no germs!
Look out for oily oil-stock promoters—most of them play the "shell game."
The few jails in Kansas that are in use should be cleaned up and modernized.
It is more or less disgraceful to have typhoid fever—for it can be prevented by vaccination.
Kansas reaches another milestone on her progress upward—compulsory free dental inspections in the public schools.

MORBIDITY REPORT FOR JULY, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Polionmyelitis (epidemic)	Influenza	Other Diseases (see Addenda)
THE STATE	164	87	56	41	18	1	125	14	50	9	3	8	12	456
Allen, except	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Iola	1	0	0	0	0	0	0	0	1	0	0	0	0	1
Anderson	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city	1	0	0	0	0	0	1	0	0	0	0	0	0	1
Barber	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Barton, except	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Bend	0	3	0	0	0	0	0	0	0	0	0	0	1	0
Bourbon, except	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Scott	1	0	0	0	0	0	1	0	0	0	0	0	0	1
Brown	1	0	0	0	0	0	5	0	0	0	0	0	0	0
Butler, except	2	0	0	0	0	0	0	0	2	0	0	0	0	0
Augusta	2	0	0	0	0	0	0	0	3	0	0	0	0	1
El Dorado	2	1	0	0	0	0	0	0	1	0	0	0	0	1
Chase	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Chautauqua	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cherokee, except	7	0	0	0	0	0	0	1	0	0	0	0	0	4
Galena	2	0	0	0	0	0	0	0	0	0	0	0	0	1
Cheyenne	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clark	0	0	0	0	0	0	0	0	2	0	0	0	1	0
Clay	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloud, except	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Concordia	2	0	0	0	0	0	2	0	1	0	0	0	0	0
Coffey	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Arkansas City	0	3	4	0	0	0	1	0	0	0	0	1	0	0
Winfield	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	4	4	1	1	0	0	9	0	0	1	0	0	0	0
Pittsburg	1	0	0	1	0	0	0	0	0	0	0	0	1	0
Decatur	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Dickinson*	0	1	1	0	0	0	4	0	4	0	0	0	0	4
Doniphan	0	1	1	0	0	0	0	0	2	0	0	1	0	0
Douglas, except	0	1	0	0	0	0	0	0	0	0	0	0	0	10
Lawrence	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Edwards*	1	0	1	0	0	0	0	0	0	0	0	0	0	3
Elk	3	0	0	0	10	0	0	0	1	0	0	0	4	1
Ellis	1	0	0	0	0	0	0	0	1	0	0	0	0	2
Ellsworth	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finney	0	0	0	0	0	0	3	0	2	0	0	0	0	0
Ford, except	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Gove	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	1	2	0	1	0	0	0	0	0
Gray	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Greeley*	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hamilton	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Harper	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harvey, except	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Newton	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jefferson	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Jewell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Johnson	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman	2	0	0	0	0	0	2	1	0	0	0	0	0	1
Kiowa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Labette, except*	1	2	0	2	0	0	0	0	0	1	0	0	0	18
Parsons	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lane	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth city	1	0	0	0	0	0	0	1	0	0	0	0	0	10

MORBIDITY REPORT FOR JULY, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Polkomyelitis (epidemic)	Influenza	Other Diseases (see Addenda)
Lincoln	0	2	0	0	0	0	0	0	7	0	0	0	0	2
Linn	0	4	0	0	4	0	4	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Lyon, except Emporia	1	0	3	0	0	0	0	0	0	0	0	0	0	0
Marion	3	0	1	0	1	0	2	1	0	0	0	0	0	7
Marshall	1	0	0	0	0	0	4	0	0	1	0	0	0	1
McPherson*	0	0	0	0	0	0	3	0	2	0	0	0	0	0
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitchell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville	5	0	0	0	0	0	0	0	2	0	0	0	0	9
Independence	7	0	2	0	0	0	1	0	0	1	0	0	0	1
Morris	9	0	0	0	1	0	0	0	0	0	0	0	0	1
Morton	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Morton	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	1	0	0	0	0	0	7	1	0	0	0	0	0	0
Neosho, except Chanute	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Ness*	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Norton	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage	2	0	0	0	0	0	0	1	0	0	0	0	0	2
Osborne	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Ottawa	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee	0	0	0	1	0	0	0	0	0	0	0	0	0	6
Phillips	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Pottawatomie	0	0	4	0	1	0	5	0	0	0	0	0	0	0
Pratt	2	2	0	1	0	0	0	0	0	0	0	0	0	8
Rawlins	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson	1	0	0	1	0	0	0	0	0	0	0	0	0	2
Republic	14	1	1	0	0	0	0	1	0	0	0	0	0	10
Rice	0	8	0	0	0	0	2	0	0	0	0	0	0	0
Riley, except Manhattan	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Rooks	0	0	0	1	0	0	16	0	1	0	1	0	0	3
Rush*	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell	0	2	0	2	0	0	0	0	0	0	0	0	0	0
Saline, except Salina	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina	1	0	1	0	0	0	4	0	1	0	0	0	0	3
Scott*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Seward	8	17	4	0	0	0	5	1	0	0	0	0	0	76
Shawnee, except Topeka	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Sheridan	1	3	0	0	0	0	0	1	0	0	0	2	0	0
Sherman*	14	4	3	1	0	0	3	1	2	1	0	1	0	64
Smith	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stafford	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Stanton	4	1	0	1	0	0	0	0	1	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Thomas	4	3	0	0	2	0	4	2	0	0	0	0	0	0
Treg*	0	0	1	2	0	0	8	0	0	0	0	0	0	2
Wabaunsee	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wallace*	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Washington	2	1	1	0	0	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	6	2	2	0	0	0	0	0	0	0	0	0	0	0
Woodson	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Wynndotte, except Kansas City	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale	10	0	6	0	4	0	11	1	2	2	0	1	0	39
	0	0	0	0	0	0	0	0	0	0	0	0	0	61

ADDENDA.

* No report.

Other communicable diseases: Cancer, 4; Chancreoid, 3; Erysipelas, 4; Gonorrhoea, 266; Malaria, 2; Ophthalmia neonatorum, 2; Pellagra, 1; Tetanus, 1; Syphilis, 147; Trachoma, 6.

What to Do with Venereal Disease Reports.

In developing the administrative control of venereal diseases it has seemed worth while to provide a standard procedure for handling cases in order to secure greater uniformity of action. A standard form of procedure is of special importance with a part-time health-officer system, for the reason that a man who is doing health work incidental to the practice of medicine seldom assumes the initiative in carrying out new lines of work, but waits for his activities to be directed by the state health department. In final analysis the effectiveness of administrative measures for the control of communicable diseases depends upon the proper handling of the individual case. As this duty falls to the local health officer it devolves upon the state department of health to contribute advice and information and prescribe a procedure for the handling of cases.

Before a health officer can take action concerning a case of venereal disease he must have information as to the existence of such case. It is for this reason that compulsory notification is looked upon as the first step in providing for the administrative control of those as well as of other communicable diseases, and the health officer must undertake the enforcement of reporting regulations as one of his important duties. The mere reporting of cases does not help control a communicable disease unless the health officer does something about cases when they are reported. The trouble at present is that so few of the part-time local health officers know what to do about a case of venereal disease when reported.

No health officer should permit himself to be caught napping on this point, as was the case of a part-time health officer when questioned about the handling of tuberculosis morbidity reports. In this instance the doctor who wanted to know the why and wherefore of reporting tuberculosis cases did not get much satisfaction from his inquiry, as is indicated by the following conversation:

"What does the board of health do when a case of tuberculosis is reported to it?"

"We file the report."

"But don't you take some step to prevent that patient from infecting others?"

"No; that is not our work. We just file the report."

"Do you send literature to the patient or to the physician for the patient?"

"No; we have no literature to send out,"

"Do you attempt, in any way, to instruct the patient or to adopt other measures to limit the spread of the infection?"

"No; we expect the physician to do that. We just file the report."

"Do you disinfect houses after the removal of consumptives?"

"No; we have no means of knowing when they move."

"But you do know when they die. You get the death certificates before you issue burial permits. Do you disinfect their houses then?"

"No; we leave that to the physician in charge."

"What good does it do to report cases unless you do something about it?"

"We file the reports and have a record of the cases."

"What do you do with these records?"

"We keep them for future reference."

It is apparent that the value to the community of filing such reports and keeping them for "future reference" is not of itself sufficiently great to warrant the trouble and expense of enforcing notification regulations. If any communicable disease is to be prevented, something must be done about each report when received. This obvious fact was recognized early in connection with venereal disease control work in Kansas, and there has been developed a set of instructions to local health officers concerning the handling of venereal-disease case reports.

It happens that the Kansas law authorizes the State Board of Health to "make and prescribe rules, regulations and procedures" for the isolation and quarantine of dangerous, communicable diseases. Accordingly certain specific instructions have been formulated and adopted by the State Board of Health as the official procedure to be followed by local health officers upon receipt of information concerning cases of venereal disease. The law provides that any person violating, refusing or neglecting to obey any of the rules, regulations or *procedures* made by the State Board of Health for the prevention, suppression and control of communicable diseases shall be guilty of a misdemeanor and subject to fine or imprisonment, or both.

FOURTEEN POINTS OF PROCEDURE.

The official procedure for using the information received in venereal-disease reports consists of fourteen points appended to the following resolution:

By authority granted in chapter 205, Session Laws 1917, to make and prescribe rules, regulations and procedures for the isolation and quarantine of persons afflicted with communicable diseases,

Be it resolved by the Kansas State Board of Health, at its annual meeting held in Topeka June 26, 1919: That the procedure outlined in the articles of instruction appended hereto be adopted as the official procedure to be followed by all local health officers of the state when information reaches them concerning the existence of a case of venereal disease, and that all local health officers be and the same are hereby directed to follow this procedure and investigate all information received concerning the existence of cases of venereal disease and take appropriate action in each case to protect the public health.

1. When a duly qualified physician reports a case of venereal disease by number and withholds the name of the patient, it is understood that the physician accepts responsibility for the conduct of the patient and the health officer should transmit the report to the State Board of Health. Should information reach the health officer through channels other than the physician's report that the conduct of a patient whose case has been reported by number is such as to expose others to infection, it is the duty of the health officer to take appropriate action to protect the public health, even though such action should require the quarantine of such infected person.

2. When the names and addresses of persons infected with venereal disease are reported by physicians, the procedure adopted should be such as will extend every proper courtesy to the physician making the report, duly respect the confidential nature of the information, and adequately protect the public health.¹ Should the report be made direct to the local health officer, it is advisable to see the physician personally, if practicable, and get all the information possible as to the character of such infected person and the likelihood that the patient's conduct may be such as might spread the disease to others.²

3. After a talk with the attending physician, if an interview with the patient is deemed necessary a *private* interview should be sought at the earliest opportunity. The purpose of the interview should be disclosed to no one except the patient. The provisions of the state regulations and local ordinance, if any has been passed, should be carefully explained so that the patient may fully appreciate the powers which the health officer may exercise under such regulations. It is probable that a plain talk of this kind in which the patient is given to understand that he must follow instructions or he may be placed under quarantine by the health officer, will be sufficient to deter him from exposing others. If not, in order to protect the public health, it is the duty of the health officer to institute quarantine without delay.

4. When the persons whose names are reported are known to be prostitutes or pimps, or to be engaged in any way in commercialized vice, it may be assumed that such persons cannot be trusted to protect others from exposure to infection, and it is the duty of the health officer to take immediate steps to quarantine them without waiting to interview either the physician or the patient. In all other cases where quarantine is instituted, the health officer will wish to satisfy himself as to the accuracy of the diagnosis.

5. Before deciding to quarantine a person infected with venereal disease, the health officer should study the facts in the case to determine the best method of handling the individual case. It is not desired to place the expense of maintaining and treating such persons for a considerable period upon the public unless such step is necessary to protect the public health. On the other hand, it is highly desirable that every person infected with venereal disease who is a menace to the public health while at liberty, should be placed in quarantine.

6. The health officer should examine promptly and thoroughly, by both clinical and laboratory methods, all persons referred by peace officers as suspected of having venereal disease, and take appropriate action to protect the public health in all cases found to be infected.

7. An official inquiry concerning all persons reported by druggists as having purchased drugs for the treatment of venereal disease should be promptly made by the health officer or his representative, to determine if the reported person is conducting himself or herself in a manner prejudicial to the public health. Measures for the treatment or quarantine of such individuals should be conditioned upon the results of such inquiry. In no case should the health officer himself treat such persons for pay, as this will cause his motives to be suspected.³

8. In many instances such persons may submit to an examination by the health officer or other physician under whose professional care they may choose to place themselves without the necessity of having them apprehended by peace officers. Such procedure is preferable when practicable, as it is less likely to attract attention and result in publicity.

9. When there is reasons to believe that a person is a menace to the public health such person may be apprehended by a peace officer upon an order issued by a health officer.⁴ Such an order constitutes the authority of the peace officer for detaining the suspected person until the medical examination has been completed.⁵

10. When a health officer orders persons placed in quarantine for venereal disease at the State Quarantine Hospital for Women or in the State Quarantine Camp for Men the actual transfer to the place of quarantine is made by a peace officer.⁶ A quarantine order issued by the health officer authorizes both transfer to place of quarantine and detention under quarantine till the patient may be released as noninfectious.⁷

11. All reports of venereal disease are required to be confidential and all administrative measures for the control of venereal diseases should be carried out with as little publicity as possible. Publicity may be most embarrassing to innocent members of the family.

12. Information concerning the presence of venereal disease may often reach the health officer through channels other than official. Private citizens or representatives of certain societies or civic organizations may report cases, and it is the duty of the health officer to carefully investigate all cases so reported. Should the investigation furnish evidence of infection that seems sufficient, the health officer should either persuade the suspected persons to submit to an examination or issue a "pick-up order" to be served by a peace officer. All cases should be dealt with in a manner that will best safeguard the public health.

13. When persons who have previously been quarantined for venereal disease become reinfected, it is advisable to have them sent to Lansing under court sentence, if the evidence will warrant such procedure, as the period of detention is apt to be longer under court sentence than under quarantine.⁸ It is the duty of all health officers to cooperate fully with the courts and with peace officers in the repression of prostitution, which is recognized as the most prolific source of venereal disease.

14. It is sometimes necessary to deal with young girls who are infected with venereal disease. These cases are usually such as need training in the Girls' Industrial School at Beloit. Girls will not be admitted to this school while infected with venereal disease. It is deemed advisable to have such cases sentenced to Beloit by the judge of the probate court and sentence suspended during the period of quarantine at Lansing. The health officer will then issue a quarantine order and the patient will be taken to the Farm at Lansing in the usual way. At the same time the superintendent of the Farm should be notified that the girl is under sentence to Beloit and the transfer to that institution may be made as soon as the patient becomes noninfectious.

NOTES ON THE PROCEDURE.

1. When the names and addresses are reported direct to the State Board of Health, it is the practice to write the physician reporting the case to insure a mutual understanding in the matter before transmitting information to the local health officer for action.

2. Occasionally the health officer may be satisfied that the instruction given by the physician will insure such conduct on the part of the patient as will not expose others to infection. This is more apt to be the case if a local ordinance has been passed and the physician can give the patient a copy of such ordinance with the assurance that the local authorities are alert in its enforcement.

3. If physicians who treat patients that have been reported by druggists will write prescriptions instead of dispensing their own drugs, the druggists will not feel so strongly that they are losing by reporting such cases.

4. Both the state regulations and local ordinances, where such ordinances have been passed, confer upon the health officer ample authority to hold persons for investigation to determine a diagnosis when there is reason to suppose that such persons may be infected with venereal disease. For this reason it is not necessary to prefer a police court charge in order to hold suspects even when they have been picked up by the police. An order from the health officer is sufficient.

5. When persons are held for examination on the order of a health officer there is no occasion to employ an attorney, as the questions involved are medical and not legal in character and there is no real service that an attorney can render. Regard for justice and square dealing will impel the health officer to protect persons held for examination from being imposed upon by lawyers who are willing to accept fees without rendering service in return.

6. Quarantine is NOT a criminal procedure and does not involve keeping court records. This point should be fully understood by the health officer and explained to other officials and all persons concerned.

7. The health officer should remember that quarantine for venereal disease is not a procedure to be carried out by rote and applied indiscriminately to all infected persons. It is expected that the majority of cases of venereal disease will be treated by private physicians. Clinics are being established in the larger cities for the treatment of others suitable for clinic treatment. Quarantine is reserved for those who are a menace to the public health if given their liberty while under treatment. It is a mistake to undertake the treatment of cases in a clinic that should be placed under quarantine.

8. The power of quarantine vested in the health officer is a discretionary power. Each case should be carefully studied as a basis for exercising judgment in its disposition.

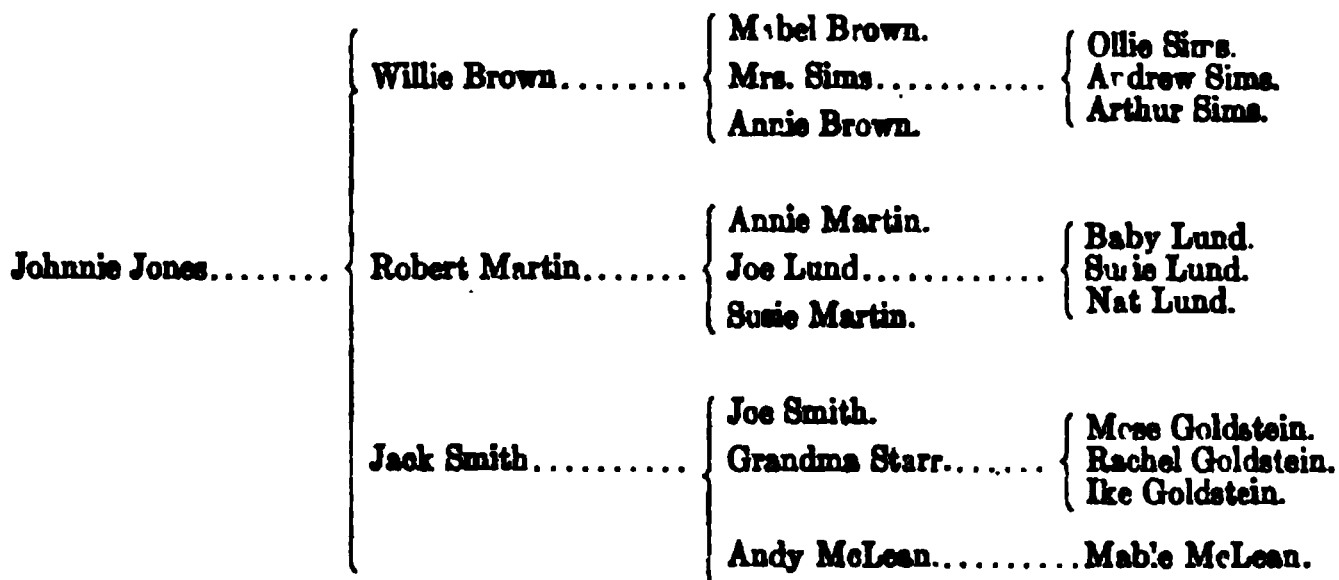
A. P. H. A. to Meet in New Orleans.

The next annual meeting of the American Public Health Association is to be held at New Orleans, La., October 27 to 30, inclusive. The central themes of discussion will be Southern health problems, including malaria, typhoid fever, hookworm, soil pollution and the privy, etc. The general belief among the health profession is that influenza will return next winter, and a full session will therefore be devoted to this subject for the purpose of developing methods of control.

A special effort has been made to arrange the program to meet the practical needs of health officials. Accordingly there will be discussion on such questions as the attitude of legislators towards public health, the obtaining of appropriations, coöperation from women's clubs, health organizations, etc., the organization of health centers, and so on. The programs of the sections will, as usual, deal with public-health administration, vital statistics, sanitary engineering, laboratory methods, industrial hygiene, sociology and food and drugs. Two special programs will also be presented on various phases of child hygiene and personal hygiene.

Winter railroad rates to New Orleans will be in effect from all points after October 1. The program of the meetings will be published in the American Journal of Public Health, appearing October 5, or may at that time be had upon application to the Secretary, 169 Massachusetts avenue, Boston, Mass.

How the Scarlet Fever Epidemic Got Started.



January 5, Johnnie Jones was out of school with a sore throat and a little rash. January 8, he returned to school and reported that he had a sore throat. No investigation was made by the teacher or health department; there was no public health nurse in that district. Willie Brown, Robert Martin and Jack Smith were chums of Johnnie Jones. January 12, Willie Brown was taken quite sick and Mrs. Sims came in to help Mrs. Brown nurse him and then went home to her own children. January 13, Robert Martin was not feeling well, had a sore throat, and Joe Lund came over to play with him. January 13, Jack Smith was taken sick and Grandma Starr came in to see if she could help Mrs. Smith and then went home to help her daughter take care of her children,

the Goldstein children. January 17, all three Sims children taken down with scarlet fever. January 17, Baby Lund taken sick; January 18, Joe Lund has severe attack of scarlet fever; January 22, Susie and Nat Lund develop scarlet fever. January 17, Joe Lund comes down with scarlet fever; Andy McLean goes over to see what the trouble is and Mrs. Smith lets him visit with Joe "for just a few minutes." January 18, Mose Goldstein has a sore throat and a slight rash; January 22, Rachel and Ike Goldstein come down with well-marked attacks of scarlet fever. January 25, Andy McLean has a sore throat and slight rash and the next day Mable McLean is taken very ill with scarlet fever.

Do you say "all this suffering because Johnnie Jones did not know that he had a mild attack of scarlet fever"? No, all this suffering because this district did not have a live health department. If it had, the school nurse would have seen Johnnie the first day he was out of school and would have recognized the condition and reported it to the health officer, who would have seen that Johnnie was quarantined until danger of transmitting the disease was passed and there would have been no more cases.

A live, up-to-date, working health department is the best investment any community can have.

Why Not the Schools?

There is a bank in North Carolina that is making health and sanitary home conditions a basis for credit. The officers have reached the conclusion that a man who lives in the midst of insanitary surroundings is not a good financial risk.

"Have you a sanitary privy?"

"Is your house screened against flies and mosquitoes?"

"Have the members of your family been vaccinated against smallpox and typhoid fever?"

These are some of the questions that are asked a prospective borrower. According to the bank officers they are based on sound banking experience. A man who has not taken advantage of available opportunities to protect his own health and that of his family is not the sort of customer the bank wants.

The reason is simple. Take, for example, a farmer, or an average merchant. The business of such a man is almost entirely dependent upon his own efforts. A case of typhoid fever not only knocks him out of productive work, but it entails a heavy expense. Illness in the family has almost the same effect. There is an economic loss that is useless, and that is liable to make such a man unable to meet his obligations at the bank. It is one of the things that can be guarded against, and this particular bank insists that it be done.

The bank in question is in Pitt county, which has a well-organized county health department with a whole-time health officer in charge.—*Monthly Bulletin, Indiana State Board of Health.*

If it is "good business" to make sanitary home conditions a basis for credit, why is it not good business for the state to make sanitary school conditions a basis for credit in the apportionment of state school funds?

Man's Most Ancient Enemy.

Do you complain because fly swatting is such a tiresome nuisance?

Well, don't worry and don't quit "swattin'," for better folk than you have "swatted" down the corridors of Time.

If Cleopatra did not wield a "swatter" herself, she probably kept her slaves busy, for every Sunday-school scholar knows the history of the plagues in ancient Egypt, which numbered flies among the calamities.

Slaves holding "fly-flappers" or "swatters" made of palm leaves are shown on old Egyptian engravings.

Alexander probably would have achieved as much fame and considerably more gain had he turned to the solving of the fly problem instead of sighing for more worlds to conquer.

It is a matter of history that the Romans were bothered as much by flies as we are now. Even the problem of wiping out the breeding places of flies was tackled by sanitarians of the days of Cæsar. They tackled it, but unfortunately did not do a complete job.

Had our own Dr. Jean Dawson been on the job in those days the grateful populace would have placed a wreath upon her head and erected a temple in her honor. And had the temple been erected Dr. Dawson undoubtedly would have promptly turned it into an Anti-Fly headquarters.

History tells of the Roman nobleman, who much concerned over the fly problem, invented the bed curtains as a substitute for the "fly-flapper," as the slave whose duty it was to wield the "flapper" was apt to take his siesta while the master was indulging in his.

The Mosaic laws aim directly at sanitation to prevent certain fly-borne diseases. So does the Koran.

In 1500 an Italian physician, Mercurialis by name, became the laughing stock of his day because he announced the "discovery" that flies were disease carriers.

This fact was "rediscovered" in 1658 by Kircher, who propounded and published in Rome the fact that flies "played an important role in the transmission of disease."

But step back a few more ages—and still we find the fly.

Fossils of the house fly appear in the tertiary rocks and even in an earlier strata known as Devonian.

Verily, the fly is at once both man's most ancient and yet most modern enemy.

America's Host of Unmarried Men.

We have ten million unmarried men in the United States between the ages eighteen and forty-four. This is forty-five percent or nearly half of the total of twenty-two million men in this age period.

There are about nine million unmarried women. Why should we have such a host of unmarried people in our highly civilized and prosperous nation?

Of our ten million unmated men, a vast number are of sound health and financially able to marry. Why do they not do it? Why have we so many

matrimonial shirkers? This is no trifling question. It may soon become one of national importance and concern.

Our nation has a declining birth rate. Its death rate from degenerative diseases caused by life strain is advancing. The increase in sedentary occupations and muscularly inactive lives is sapping the physical stamina of the people. Under these conditions the significance of our excessive number of unmarried people is obvious.

Clearly for the safety of the state and of the race we need more fathers and mothers. We need not necessarily larger families, but more families.

The development of expensive tastes by our young women and the high cost of living furnish excuses for many young men to remain single. But there are surely three million out of the ten million to whom these excuses could not apply and who, in the natural order of things, should be married.

The wealth of our people has increased marvelously in recent years and the proportion of married people should have increased accordingly.

Comparisons with the past or with other countries does not dispose of the problem or tell us why our surplus millions of marriageable men should remain single. As a result of this condition, a vast number of young women are forced to toil in factories and business houses to earn their daily bread—work which nature did not intend them to do and which, in many instances, adversely affects their health and lives. And this continues while a great army of unmarried men are selfishly spending their earnings upon themselves. Many of them, without a care or responsibility, develop extravagant and often vicious habits which they decline to give up for an orderly, rational existence as married men.

This is an unnatural state of affairs, and merits attention.

If our nation and race are to endure, the trend of national health and vitality must not be permitted to decline.—*Equitable Public Bulletin*.

Sanitation and Salvation.

By A. Woodruff Halsey.

The first missionary to the Gentiles saw clearly the relationship between Sanitation and Salvation, when in his letter to the Thessalonian Christians he prayed that their "spirit and soul and *body* be preserved entire." The non-Christian world is an unsanitary world. It is still true that "my people perish from lack of knowledge" of the simplest elements of sanitation.

In India the mortality of children is seven times greater than in England. The average life is twenty-two and a half years. In Calcutta, which is the medical center of India, sixty-two percent of the people die with no medical attention. In Africa the missionary has been the apostle of sanitation. In China he is to-day a leader in sanitation.

At Chefoo, an interesting experiment was carried on last year. Teams, numbering five, three Chinese, two foreigners, the three Chinese

college graduates, one an ordained man, and of the two foreigners one a physician, visited city after city. They were accompanied by a force of volunteer workers, preachers, Bible women and church members. Lectures on education, fundamentals of hygiene, the evil of superstition, the prevention of tuberculosis, the harm of early marriage, the evils of foot binding and the message of the Gospel, were given. In the charts used was one in which the pulling of a string released a black band of cloth upon which were white skulls showing the death rate per annum. When the Chinaman, who deals in the concrete, saw America with only fourteen skulls and China with forty, he had learned his lesson. The experiment has proved a great success, and is being tried on a very large scale throughout China. In Hainan, by the use of slides and talks, much has been done to remove the filthy condition of the streets, to show the right disposal of refuse, how to drive out the mosquito and how to do away with the Chinese stove with its smoke and filth, "a menace to good sanitation."

In India great advance has been made. In the Montagu-Chelmsford Reform report, which stirred India to its depths last year because of the reforms advocated, the following significant statement occurs:

"It is difficult to over-estimate the devoted and creative work which missionary money and enterprise are doing in the fields of education, morals and sanitation."

In view of the widespread interest in the reform movement in India and the accurate knowledge of conditions displayed in this report, this statement is most suggestive of the work which the missionary is doing in linking sanitation with salvation.

A few years ago the King of Siam was greatly disturbed because the death rate exceeded the birth rate. He applied to one of the American Presbyterian missionary physicians. Vaccination was suggested. It was made compulsory, and soon the birth rate exceeded the death rate.

Luke: the Beloved Physician.

The personal friendship of Luke with Mary, the mother of Jesus, enabled him to give us a glimpse at the boy life of the Master. This intimacy, coupled with his professional character as a physician, enabled him to draw from her the particulars of the miraculous conception, as well as the singular circumstances surrounding and connected with the Messiah's birth. Luke's narrative tells a mother's story. A womanly woman would not—could not—tell that story to any other than her confidential physician, nor could another person fully appreciate the details of such an event. Think for a moment of the utter impossibility of a mother telling of these occurrences to a rude fisherman, or to a tax-gatherer! Her nature would revolt and compel her to shrink from the ordeal, but to Luke—he was her doctor. He knew of the distress and maternal agony that she had suffered; she knew of his exceeding gentleness and sympathetic nature. She would and did tell him the whole story.—*Dr. J. C. Culbertson.*

A Judge's Decision.

Judge A. J. Rodenbeck, justice of the supreme court of New York, seems to be a "most righteous judge." The Rochester, N. Y., health bureau required a specimen of blood from all persons engaged in the production and handling of milk to be sold in that city. This was for the purpose of discovering typhoid-fever carriers. One dealer refused to comply with the requirements and Justice Rodenbeck rendered his decision as follows:

"The health authorities of the city are not required to wait until an epidemic of typhoid has broken out before taking precaution against it, but in the exercise of a reasonable judgment may anticipate such a condition and may and should make all reasonable efforts to perform the duty imposed upon them by statute to take all reasonable precautions to protect the public health before the emergency arises.

"The degree of precautions necessary to protect and preserve the public health under normal conditions, in the absence of an emergency calling for extraordinary measures, is to be determined by circumstances, and each requirement must be passed upon in the light of the circumstances and conditions existing at the time of its adoption.

"The requirement of a blood test as a condition for a license to sell milk in the city is a reasonable condition, since it imposes no serious inconvenience upon the applicant, and it is a matter of common belief that typhoid is a contagious disease and that such a test will reveal whether or not the person whose blood is examined has had typhoid and is a carrier of typhoid, and the transmission of this disease may thus be avoided by suitable precautions.

"The requirement of a blood test is one of the conditions for a license. Among others, is one resting in the sound discretion and good judgment of the commissioner of public safety in the absence of an ordinance of the common council limiting his authority, and is not subject to review by the courts where the requirement appeals to the courts as reasonable and just, necessary to protect the public health, and neither capricious, arbitrary or unjust."

Tweedledum and Tweedledee.

Have you ever noticed?

When the Other Fellow acts that way he is "ugly"; when you do it's "nerves."

When the Other Fellow is set in his ways he's "obstinate"; when you are it is just "firmness."

When the Other Fellow doesn't like your friend he's "prejudiced"; when you don't like his you are simply showing that you are a good judge of human nature.

When the Other Fellow tries to treat some one especially well he is "toadying"; when you try the same game you are using "tact."

When the Other Fellow takes time to do things he is "dead slow"; when you do it you are "deliberate."

When the Other Fellow spends a lot he is a "spendthrift"; when you do you are "generous."

When the Other Fellow picks flaws in things he is "cranky"; when you do you are "discriminating."

When the Other Fellow is mild in his manners he is a "mush of concession"; when you are it is being "gracious."

When the Other Fellow gets destructive it is "toughness"; with you it is "forcefulness."

When the Other Fellow gets too lively he is "fast"; when you do it is just "high spirits."

"When the Other Fellow holds too tight to his money he is "close"; when you do you are "prudent."

When the Other Fellow dresses extra well he's a "dude"; when you do it is simply "a duty one owes to society."

When the Other Fellow runs great risks in business he's "foolhardy"; when you do you are a "great financier."

When the Other Fellow says what he thinks he's "spiteful"; when you do you are "frank."

When the Other Fellow won't get caught in a new scheme he's "back-woodsy"; when you won't you are "conservative."

When the Other Fellow goes in for music and pictures and literature he's "effeminate"; when you do you are "artistic."—*Life*.

Smallpox.

Eleven of the thirteen patients now in the smallpox hospital of Chicago, qualifying for waffle-iron faces, came from a "health institute" which denounces vaccination as wicked, superstitious, useless, nasty, impertinent, and an "invasion of personal rights." This condition is typical. Smallpox has been well named the "poisoned arrow of the fool-killer." Those who want to escape these arrows had better provide themselves with the only shield that experience has proved effective—vaccination.—*Chicago Journal*.

The Heavy Hand of Heredity.

When a school for incorrigible boys was carefully studied it was found that of the 200 boys 127 were deficient in their general mental make-up, either in the direction of feeble-mindedness or in the direction of hysteric emotion and epileptic disturbance. In eighty-five cases the father or mother, or both, were drunkards; in twenty-four cases the parents were insane; in twenty-six cases, epileptic; and in twenty-six further cases, suffering from other nervous diseases. Not the criminal tendency was born in the poor children, but the insufficient capacity and resistance for the central nervous system; and this was their inheritance from abnormal and degenerate parents.—*Indiana Bulletin*.

Oh, Bliss!

A competent doctor named Bliss,
Had a case with tu-ber-cu-lo-sis.

He told the whole truth,
And now a bright youth
A nice, shiny coffin will miss.

—*Richmond Health Bulletin*.

Steady buddy-
There's a come-back!



SOCIAL HYGIENE DIVISION ARMY EDUCATIONAL COMMISSION

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

September, 1919

SPECIAL INFLUENZA NUMBER.

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Be prepared.

Be a good citizen.

The best influenza prescription: Go to bed.

Give your neighbor the benefit of the doubt.

"Over there" we did our fighting standing up and running forward.

In the battle against "flu" the only way to fight is lying down, and let someone else do the running.

The quarantine breaker is a bad citizen, but not so bad as the person who would rather hide disease than report it.

Watch: *First.*—Your person. *Second.*—Your school. *Third.*—Your place of business. *Fourth.*—Your entire community.

PHYSICIANS—ATTENTION!

In anticipation of a return of the influenza epidemic, it is desired that all physicians who are willing to render emergency service will send their names to the Secretary, State Board of Health, at Topeka. The pay will be at the rate of \$200 per month, with \$4 additional for maintenance, and necessary traveling expenses. Report immediately.

MORBIDITY REPORT FOR AUGUST, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Poliomyelitis (epidemic).	Influenza.	Other Diseases (see Addenda).
THE STATE.	120	39	54	68	6	0	59	5	14	9	6	10	6	0
Allen, except.	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Iola.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson.	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except.	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city.	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Barber.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barton, except.	0	1	1	0	0	0	0	0	0	0	0	0	4	0
Great Bend.	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except.	1	0	0	0	0	0	0	0	0	0	0	1	0	0
Fort Scott.	0	0	0	0	0	0	2	0	0	0	1	0	0	0
Brown.	2	0	1	1	1	0	0	0	0	0	0	0	0	0
Butler, except.	1	2	0	4	0	0	0	0	0	0	0	0	0	0
Augusta.	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Eldorado.	6	0	2	0	0	0	1	0	0	0	0	0	0	0
Chase.	2	0	0	4	0	0	0	0	0	0	0	0	0	0
Chautauqua.	0	0	1	0	0	0	1	0	0	0	0	0	1	0
Cherokee, except.	7	0	2	0	0	0	0	0	0	0	0	0	0	0
Galena.	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Cheyenne.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clark.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cloud, except.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concordia.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey.	2	0	2	0	0	0	1	0	0	0	0	0	0	0
Comanche.	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Cowley, except.	1	0	1	2	0	0	1	0	0	0	0	0	0	0
Arkansas City.	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except.	7	5	2	0	0	0	1	0	0	1	0	0	0	0
Pittsburg.	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Decatur.	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Dickinson.	1	0	0	1	0	0	0	0	0	0	1	0	1	0
Doniphan.	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Douglas, except.	0	0	0	1	0	0	0	0	0	2	0	0	0	0
Lawrence.	4	0	2	5	0	0	1	0	0	0	0	0	0	0
Edwards.	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Elk.	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ellis.	1	0	5	0	0	0	0	0	0	0	0	1	0	0
Ellsworth.	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Finney.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except.	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Dodge City.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa.	1	0	0	6	0	0	0	0	0	0	0	0	0	0
Geary, except.	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Junction City.	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Gove.	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Graham*.														
Grant*.														
Gray.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley*.														
Greenwood.	4	0	1	1	0	0	6	0	0	1	0	0	0	0
Hamilton.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper.	0	0	1	1	0	0	1	0	0	0	0	0	0	0
Harvey, except.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Newton.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson*.														
Jefferson.	0	5	0	0	0	0	2	0	0	0	0	0	0	0
Jewell.	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Johnson.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kearny.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman.	6	0	0	0	0	0	0	1	0	0	0	0	0	0
Kiowa*.														
Labette, except.	4	0	0	0	0	0	2	0	0	0	0	0	0	0
Parsons.	3	2	0	2	0	0	2	0	1	0	0	0	1	0
Lane.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth city.	0	2	4	0	0	0	0	1	0	0	1	0	0	0

MORBIDITY REPORT FOR AUGUST, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid..	Smallpox.....	Diphtheria.....	Scarlet Fever....	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenspox.....	Mumps.....	Pneumonia (acute lobar)..	Meningitis (epidemic)....	Polio-myelitis (epidemic)....	Influenza.....	Other Diseases (see Addenda).
Lincoln.....	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Linn.....	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia.....	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Marion.....	0	0	2	0	0	0	0	0	1	0	0	0	0	0
Marshall.....	2	0	0	0	0	0	0	1	0	0	0	0	0	0
McPherson.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Meade.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mitchell.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville.....	1	0	0	0	1	0	0	0	2	0	0	0	0	0
Independence.....	5	3	0	0	0	0	0	0	0	0	0	0	0	0
Morris.....	2	1	0	1	0	0	0	0	0	0	0	0	0	0
Morton.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Neosho, except Chanute.....	0	0	2	2	0	0	0	0	0	0	0	0	0	0
Ness*.....	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Norton.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Osborne.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa.....	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Pawnee.....	0	0	0	3	0	0	0	0	1	0	0	0	0	0
Phillips.....	1	0	0	2	0	0	0	0	1	0	0	0	0	0
Pottawatomie.....	0	0	3	0	0	0	1	0	0	0	0	0	0	0
Pratt.....	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Rawlins.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson.....	0	2	0	1	0	0	2	0	0	0	0	0	0	0
Republic.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Rice.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riley, except Manhattan.....	0	0	0	0	0	0	8	0	1	0	0	0	0	0
Rooks.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except Salina.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scott.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita.....	3	0	2	0	0	0	0	0	0	0	0	0	0	0
Seward.....	12	1	3	2	0	0	6	0	0	0	0	0	0	0
Shawnee, except Topeka.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Sheridan.....	3	2	2	0	0	0	2	0	1	0	0	1	0	0
Sherman.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Smith.....	0	1	0	2	0	0	0	0	0	0	0	0	0	0
Stafford.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington.....	1	0	1	4	1	0	3	0	1	0	0	0	0	0
Thomas.....	0	0	2	3	0	0	3	0	1	0	0	0	0	0
Trego.....	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Wabaunsee.....	0	2	1	0	0	0	0	0	0	0	0	0	0	0
Wallace*.....	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington.....	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Wichita.....	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Wilson.....	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Woodson*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except Kansas City.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale.....	10	0	2	2	2	0	6	0	0	2	1	2	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ADDENDA.

* No report.

Other communicable diseases: Cancer. Chancroid, 3; Gonorrhea, 261; Malaria, 1; Pellagra, 1;
Syphilis, 148; Trachoma, 19.

Influenza in Kansas.

One year ago Kansas felt the advance touch of that great scourge of influenza that will pass into history as one of the pandemics of disease that made humanity to shudder and the whole world to tremble.

In the three months that followed Kansas buried 6,729 of her citizens, of all races, sexes and occupations.

What lessons have we learned from the disaster? In what measure are we prepared to meet a second attack?

The State Board of Health has made a careful study of the epidemic as it affected Kansas. Tables have been prepared and charts drawn showing how various groups of citizens were affected. These tables—experience tables—help us to certain conclusions that may serve to guide us in the future.

Fact: Infants and old persons, being somewhat protected from exposure, did not yield as many cases of disease. But of the number attacked a much larger percentage died than at other stages of life.

Conclusion: It is possible to shield the young and weak from infection. It is very important to do so since their chances of surviving it are small.

Fact: Next to the infants and old people the greatest number of cases and the greatest number of deaths occurred at the busy stage of life from 25 to 35.

Conclusion: Experience with individual cases shows that many deaths at this "busy stage" occurred because men and women would not seek rest and care until forced by the toxins of the disease to surrender. The time to fight influenza effectively is at its initial approach.

Fact: The death rate was lower in the country than in the city, both as to deaths per 1,000 population and percentage of deaths to cases reported.

Conclusion: In spite of deficiency in medical attendance the dweller in the country had the advantage in the final outcome.

Fact: Excepting for the school-age groups there were more cases reported per 100 population in cities than in the country districts. But for school ages there were more cases in the country.

Conclusion: Children attending city schools were better protected, possibly, because of a more rigid morning inspection to detect beginning cases. Every care should be exercised, both by intelligent inspection by teachers and the employment of school nurses, to prevent the spread of infection in schools, city and country alike.

Be Prepared.

(The following is issued by Surgeon-General Rupert Blue, A. S. P. H. S.)

The question of most practical and immediate interest is the probability of recurrence in the near future. Recurrences are characteristic of influenza epidemics; and the history of the last pandemic and previous ones would seem to point to the conclusion that this one has not yet run its full course. On the other hand this epidemic has already shown three

more or less distinct phases and has been more severe, at least in mortality, than the three-year epidemic of 1889-'92, facts which justify the hope, though not the conclusion, that it has run its course already.

It seems probable, however, that we may expect at least local recurrences in the near future, with an increase over the normal mortality from pneumonia for perhaps several years; and certainly we should be, as far as possible, prepared to meet them by previous organization of forces and measures for attempted prevention, treatment, and scientific investigation.

There should be no repetition of the extensive suffering and distress which accompanied last year's pandemic. Communities should make plans now for dealing with any recurrence of the epidemic. The prompt recognition of the early cases and their effective isolation should be aimed at. In this connection, attention is called to the fact that the cases may appear to be just ordinary colds. A recent extensive outbreak of what were regarded as "summer colds" in Peoria, Illinois, proved on investigation to be an epidemic of a mild type of influenza. Experience indicates that these mild epidemics are often the starting points of more severe visitations. Hence every effort should be made to discover as early as possible any unusual prevalence of "colds."

For municipalities operating on a budget basis, it is important that all delay in providing the necessary financial support to the health authorities in dealing with a recurrence of the epidemic be avoided by setting aside an emergency epidemic fund. This may prove of the greatest value in carrying out important preventive measures in the early days of the epidemic, at a time when their beneficial effect is greatest.

The most promising way to deal with a possible recurrence of the influenza epidemic is, to sum it up in a single word, "Preparedness." And now is the time to prepare.

Anticipating the need of preparation the Kansas State Board of Health, as early as August 6, sent the following message to the 105 counties of our state:

TO THE BOARDS OF COUNTY COMMISSIONERS:

The State Board of Health wishes to invite your attention to a matter of the gravest importance affecting the life and health of the citizens of your county. While we do not wish to create unnecessary alarm, nor do we wish to pose as a prophet to the end that we can foretell the occurrence of events in the future, yet if we are to judge from the history of other epidemics of influenza we will in all probability have a recurrence of this serious disease in Kansas sometime this fall or winter. I would, therefore, admonish you to prepare for such an eventuality to the end that we may not be left in a helpless situation should our community become overwhelmed with the epidemic as it was last year.

The legislature failed to make any state appropriation to assist in providing emergency facilities in the nature of medical supplies, nurses and medical personnel. It was, therefore, left to each community to provide ways and means from its own resources. It is strongly urged that each county having a population of less than 10,000 vote at least \$2,000 as an emergency fund; that counties having a population between 10,000 and 20,000 vote a fund of \$4,000; counties having a population between 20,000 and 30,000 vote a sum of \$5,000; counties having a population between 30,000 and 40,000 vote a fund of \$6,500; and those having a population of over 40,000 vote a fund of \$10,000.

This fund is not to be used for any other purpose than that of an emergency to meet unusual and extreme conditions:

First—For the operation, maintenance and conduct of emergency hospitals.

Second—For emergency nurses.

Third—For emergency medical personnel.

Fourth—For the purchase of such vaccines as may be recommended by the State Board of Health for free vaccination.

The State Board of Health has a list of volunteer nurses and doctors who have agreed to respond to emergency call when such call is issued by the officials in any municipality or county in the state, the payments for such services being those fixed by the United States Public Health Service during the last epidemic.

As a preliminary, options should be secured on such suitable building or buildings, if none are already available, for the purpose of an emergency hospital and a complete program of emergency aid worked out with your county and municipal boards of health in coöperation with the local Red Cross organization.

It is desired that the action of your board and a copy of the program, when completed, be transmitted without unnecessary delay to the State Department of Health. May I urge upon your honorable board that this letter is not a mere formality but a call to service as well as a warning to be prepared. The State Department of Health may not be held to account if communities do not make the necessary preparation to meet a grave emergency.

Respectfully,

S. J. CRUMBINE, M. D., *Secretary*.

Some counties responded loyally and promptly. We hope that a great many others have the subject under consideration, although so far they have come to no decision.

It is not yet too late to prepare. See that your county is among those "who have oil in their lamps."

Influenza Bulletin.

Issued by the Massachusetts State Department of Health.

To keep well, keep clean.

Wash your hands before each meal.

Don't go to the crowded places.

Avoid the person who sneezes.

Smother your cough in your handkerchief.

Keep out of dirty restaurants.

Warmth is necessary. Be well clothed.

Soda is unnecessary. Why run the risk of infection from a dirty glass?

Safety lies in boiled dishes.

A common towel is only for filthy people.

You wouldn't use my tooth brush. Why use my drinking cup?

Sleep well. Eat well. Play well.

DON'T WORRY.

INSTRUCTIONS TO NURSES.

Practice what you preach—keep clean. Isolate your patients.

When in attendance upon patients, wear a mask which will cover both the nose and mouth. When the mask is once in place do not handle it.

Change the mask every two hours. Owing to the scarcity of gauze, boil for one-half hour and rinse, then use the gauze again.

Wash your hands each time you come in contact with the patient. Use bichloride of mercury, 1-1000, or Liquor Cresol compound, 1-100, for hand disinfection.

Obtain at least seven hours' sleep in each twenty-four hours. Eat plenty of good, clean food.

Walk in the fresh air and sunshine daily, if possible.

Sleep with your windows open in all weather.

Insist that the patient cough, sneeze or expectorate into cloths that may be disinfected or burned.

Boil all dishes.

Keep patients warm.

INSTRUCTIONS TO HOUSEHOLDERS.

Keep out of the sick room unless attendance is necessary.

Do not handle articles coming from the sick room until they are boiled.

Allow no visitors, and do not go visiting.

Call a doctor for all inmates who show signs of beginning sickness.

The usual symptoms are: inflamed and watery eyes, discharging nose, backache, headache, muscular pain, and fever.

Keep away from crowded places such as "movies," theatres, street cars.

See to it that your children are kept warm and dry both night and day.

Have sufficient fire in your home to disperse the dampness.

Open your windows at night. If cool weather prevails, add extra bed clothing.

INSTRUCTIONS FOR WORKERS.

Walk to work if possible.

Avoid the person who coughs or sneezes.

Wash your hands before eating.

Make full use of all available sunshine.

Do not use a common towel. It spreads disease.

Should you cough or sneeze, cover nose and mouth with handkerchief.

Keep out of crowded places. Walk in open air rather than go to crowded places of amusement.

Sleep is necessary for well-being—avoid over-exertion. Eat good, clean food.

Keep away from houses where there are cases of influenza.

If sick, no matter how slightly, see a physician.

If you have had influenza, stay in bed until your doctor says you can safely get up.

A Triple Appeal against Influenza.

By DR. T. D. TUTTLE, State Epidemiologist.

TO PHYSICIANS.

I doubt if there is a physician in the world who would knowingly permit the spread of any disease, no matter how harmless such disease might be. When it comes to dealing with a disease, the severity of which was demonstrated during last winter, there is not a physician who will not willingly bend every effort within his power to prevent or curtail the spread of influenza.

The only question is one of recognizing as a source of a severe epidemic the very mild cases of this disease. I thoroughly appreciate the hesitancy with which a physician places in quarantine members of a household, when he is himself very doubtful as to whether he is dealing with merely a coryza or a true case of a contagious disease, and yet, if a severe epidemic is to be prevented, these doubtful cases must suffer the penalty of a brief quarantine in order that the unrecognized cases may not prove a source of infection for many people.

We urge you, the physicians of the state, to make prompt report of every case that may come under your observation. Your community looks to you, not only to comply with the laws, but in all human kindness, to report to the proper authorities all cases of communicable diseases under your observation, whether the person afflicted is a patient of yours or merely an acquaintance. The police officer may recognize a crook but he cannot recognize a case of influenza or a case of smallpox, but you can and the people depend on you to tell the authorities when such diseases come to your attention, through whatever channels they may come.

We have confidence in the medical profession of this state. We look to you to bend every effort to prevent an epidemic of influenza this winter as you bent every effort last winter to relieve the suffering of those contracting the disease. We hope that by the united efforts of the medical profession, the health authorities, and the people as a whole, we may avoid the catastrophe that confronted us last winter.

TO HEALTH OFFICERS.

There is more or less difference of opinion as to how much of an epidemic of influenza we will have this winter, but there seems to be very few indeed who are not agreed that we will have an epidemic throughout the entire country. During the summer, there has been only one week that we have not had cases of influenza reported from some part of the state, and very few weeks during which we have not had cases reported from all parts of the state. These reported cases are the well-recognized "standard" cases. In addition to these cases, there has prevailed throughout the state during the summer a disease that has been designated by some, "summer influenza." I think the author of this name used good judgment only half of the time. Had he simply said "influenza" and omitted "summer" he would have hit the nail on the head, as this disease that has prevailed is in all probability nothing more nor less than influenza in a mild form, and from just such cases as these will develop the severe forms that we must anticipate in a very short time.

The severity of the epidemic this winter will depend to a large extent on three elemental conditions; first, the promptness and completeness with which the attending physician reports all cases of suspected influenza which he may be called upon to attend. Without prompt and complete reports on the part of the physician, a severe epidemic cannot possibly be avoided. Second, the activity of the health officers in establishing and thoroughly quarantining all reported cases. Third, the moral support of the health officer by the people of the state; and this moral support must include the notification of the health officer by the people of any case that might possibly be one of a communicable disease.

If these fundamental principles are thoroughly complied with in all parts of the state, we can, in all human probability, confine the influenza to a comparatively few cases. If these principles are not complied with, then we must confront a severe epidemic, similar to that of last year, with its accompanying loss of life, loss of money and general business disturbance.

We, therefore, cannot appeal too earnestly to each local and county health officer to bring the matter before the medical profession, the county commissioners and the people of the community, urging the providing of suitable places for those afflicted with the disease who cannot be cared for at home, and the placing of the proper quarantine on every premises where the disease may appear.

TO THE PEOPLE.

We have appealed to the health officers and to the physicians of the state to do all in their power to prevent a severe epidemic of influenza this winter, but without the honest and earnest coöperation of the people as a whole and the whole of the people, all the efforts of the medical profession and the health officers will go for nothing.

The merchant who places business above health will find himself confronted by the same business disturbance that confronted him a year ago. The pleasure seeker who refuses to forego the pleasure of attending places of public amusement because he is suffering from a mild form of influenza, will find himself with no public gatherings to attend.

The master of the lodge who insists on good attendance at meetings regardless of the fact that many of the members are suffering from a mild form of influenza, will find himself with no lodge to preside over.

The divine worshipper who attends church while he is suffering from a mild form of influenza, will find himself confronted by a closed church door.

Thus business must defer to health or the laws of nature will force business to recognize her power, not only by interrupting business, but many merchants will find their stores with ribbons on the doors. The members of the lodge will don their "last rites" uniforms. The pleasure seeker will attend his last public gathering in a single compartment vehicle, and the divine worshipper will mourn at the grave of his beloved minister without realizing that this minister's fate is the result of his parishioners' carelessness.

We appeal to the people of the state to patiently observe the restrictive measures that may be put on them when any communicable disease may appear in the community, and to make known to the health authorities any case of contagious disease, whether in his own family or in that of a neighbor. We are not asking you to become "tattle-tales," but we are asking you to assume the same protection of health and life as you do for the protection of property. You do not hesitate for an instant to report any one conducting himself in such a manner as to threaten the destruction by fire of a neighbor's property. You do not hesitate to report anyone conducting himself in such a manner that he was evidently taking or intending to take the property of another. Yet you hesitate to report one whose actions endanger the health and life

of your family and of your neighbor's family, and whose actions indicate that he may rob you of your dearest loved ones. To report the thief of property seems to be an honorable procedure, but to report the thief of health and life seems to be considered dishonorable. It is high time to change our standards of honor.

The Treachery of Influenza.

DR. C. H. LERRIGO, in the *Country Gentleman*.

Any physician will tell you that treachery is one of the serious characteristics of influenza. It is quick to attack and slow to let go. Its incubation period, that is, the time elapsing between the moment you inhale the germ and that in which it announces that it has annexed your outlying provinces, may be only one to three days.

It observes no rules of warfare—this grippe, this influenza, this blitzkatarrh. It hurls noxious gases into unprotected throats and nostrils; it sends heavy shot at little children and at the aged and infirm; it sinks unarmed vessels laden with nothing more aggressive than bright hopes; it plays hob with us in general. When it invaded Ireland it was popularly known as that "spawn o' the devil as killed ye off six weeks after ye was completely well of it."

Most diseases are classified and a regular course of their symptoms is outlined, but influenza submits to no classification or outline. It is a pathological potpourri of selections from almost every other known disease. The catarrh of measles, the chill of pneumonia, the sore throat of scarlet fever, the ache of rheumatism, the headache of meningitis, the weariness of typhoid—all these may appear in any ordinary case of influenza.

The disease may run through a family, one member being attacked in the nasal passages, one in the tonsils, one in the bronchial tubes, and possibly another being affected in every one of the parts mentioned. The majority of cases of influenza have catarrhal symptoms as a prominent feature, and that is why simple "colds" are so often charged to the account of influenza.

If there is one thing that may be said to be characteristic of influenza it is the extreme prostration that accompanies every symptom. It is out of all proportion to the visible signs of damage. There is distress in the nose, but surely a running nose should not exhaust your vitality. Your throat is sore, but why should a sore throat destroy all earthly ambition? You ache like the toothache, or rather you believe that toothache would be really gratifying by comparison—but a grown person ought not to want to take to his bed because of an ache, even though he be first hot, then cold, then hot and cold together.

This prostration is quite above the ordinary and it comes in spite of your bravest opposition. You understand it a little better when you learn that the particular action of the influenza bacillus is to generate in the human body certain poisonous substances which are extremely depressing to the great nerve centers that control the important functions of respiration, circulation and digestion.

These poisons may be so virulent as to create a depression from which no recovery is possible. In early infancy and in old age, the extremes of life which offer least resistance, the disease is often fatal. There may be very little or no evidence of the ordinarily accepted symptoms of catarrh of the nose, throat and chest, the fatal end occurring because the nervous system is overwhelmed by the poison.

The treatment of influenza is first to prevent, then to cure, then to maintain the cure. It is a disease prolific in relapses. That brings me back to my quotation from eminent authority pointing out the fact that it is of slow recovery and serious in its effect upon the heart. This is the most serious of all the serious things about influenza. It has a faculty of developing a latent disease into an active one and making a slight organic trouble serious.

You, for example, have had at one time what you called a little kidney trouble and the doctor said was an "acute nephritis," or perhaps you had a heart affection which he vaguely referred to as a "slight murmur." You have gone about your business with little inconvenience and the matter has so far escaped your recollection that even a life-insurance examination would not sharpen your memory.

But influenza finds it out. For such weak points this demon searches with especial fervor. He has no sense of gallantry and no bowels of mercy. Be especially careful, you with this "slight murmur" or "touch of kidney trouble." Of all persons, it is imperative upon you to make sure that you are absolutely the victor before you attempt to resume the functions of life which place a tax upon your organs. The reasons for relapses, for bad hearts, and for Bright's disease following influenza, are, nine times out of ten, a resumption of work before the disease is really conquered.

Influenza is preventable. Don't take it. Work right, eat right, sleep right and thus maintain your physical resistance. Shun crowded halls and cars and fly from sneezing, coughing persons.

Influenza is contagious. Don't spread it. If you are a victim safeguard your family by keeping to your room and using separate toilet articles, towels, dishes, and so on. Spray your nose and throat with an antiseptic solution.

Influenza is dangerous. Don't laugh at it. Be as cheerful as you please, but don't slight proper precautions. And be especially careful if you are one of those with some weakness open to its attack, for influenza makes special sport of the defenseless.

Free Dental Inspection in Schools.

By DR. FLORENCE B. SHERRON, Director Child Hygiene.

The law requiring free dental inspection in all the public schools of Kansas makes possible four very important results:

1. Immediate benefit to the health of the children treated.
2. Effective education of the children in practical dental hygiene.
3. The securing of statistics which will reveal present conditions.
4. The compilation of data for a basis of future methods and procedure.

In order to operate the law on an efficient basis and secure the above results, uniformity of procedure is essential. Uniformity can only be secured by the use of uniform records and uniform methods of tabulation. Therefore the executive council of the State Dental Society and the State Board of Health have jointly compiled and recommend uniform inspection blanks, covering both the inspection of the mouth and teeth and certain physical points often associated with defective teeth. The teacher is requested to fill out a preliminary physical inspection blank and copy the records thus obtained together with the dental inspection on a tabulation sheet which is to be sent to the State Board of Health for statistical purposes.

When the results of this combined dental-physical inspection of the school children of Kansas are summed up, it will make one of the most valuable pieces of health research undertaken in any state, and will furnish unique and important data which will serve as a guide in future health work.

This is the year to clean up and make healthy the mouths of the children of Kansas. Every teacher, physician, nurse and parent should concentrate on this job this fall and *do it right*.

The law, House bill No. 323, is as follows:

HOUSE BILL No. 323.

AN ACT to create and maintain free dental inspection in the public schools in the state of Kansas, amending sections 9099, 9100 and 9101 of the General Statutes of 1915 and repealing said original sections.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That section 9099 of the General Statutes of 1915 be amended to read as follows: Sec. 9099. That the boards of education of cities of the first and second class and school boards of school districts are hereby required to provide for free dental inspection annually for all children, except those who hold a certificate from a legally qualified dentist showing that this examination has been made within three months last past, attending such schools.

SEC. 2. That section 9100 of the General Statutes of 1915 be amended to read as follows: Sec. 9100. That said boards of education and district boards of each school shall provide a place of inspection and designate some competent, licensed dentist or dentists to make such inspection, and such boards of education and district boards may fix a compensation for such services, which sum may be paid out of the school fund of each school for the services rendered therein, and said boards of education for their respective cities and the county superintendent of public instruction for school districts are hereby authorized to make all necessary rules and regulations for the proper conduct of such inspection and carrying into effect all of section 1 of this act, and furnish all necessary forms and blanks for the reports of such inspection.

SEC. 3. That section 9101 of the General Statutes of 1915 be amended to read as follows: Sec. 9101. That certificate of the result of such inspection, together with suggestions of requirements for the curing of any defects found shall be made by the party making such inspection, in duplicate, one copy of same to be furnished to the child examined, the other to be filed with the clerk of the school board to which said child belongs: Provided, however, that no work other than the inspection and report shall be performed by examining dentist without the consent of the parents or guardian of the child.

SEC. 4. That sections 9099, 9100 and 9101 of the General Statutes of 1915 be and the same are hereby repealed.

SEC. 5. This act shall take effect and be enforced from and after its publication in the statute book.

Save the Babies.

By DR. FLORENCE B. SHERBON, Division Child Hygiene.

Influenza is carried by breath and sputum. Mothers must be brought to realize this. The infant and the small child must be protected from the breath and sputum of others.

If only sputum were scarlet red or brilliant green we would be mightily surprised at the places and at the frequency with which we would see these colors.

Every mother should have the fixed habit of washing her hands before handling her baby. She should never kiss her children or breathe on them when she has a cold. A nursing mother who has the slightest sign of a cold should always tie a large handkerchief over her mouth and nose while nursing her baby, and drop the handkerchief into boiling water on taking it off. Many babies lost their lives from "flu" and pneumonia last winter, because mothers neglected these simple precautions.

Daily Inspection in Influenza.

Inspect Your Person.—Any abnormal symptom, especially if it is indicated by sneezing, coughing or aching, should be treated as suspected influenza. Put yourself in provisional quarantine. Suspend all duties. Secure medical attention. The entire sum of your physical forces are needed to fight influenza. *Go to bed.*

Inspect Your Family.—Do not take it for granted that your children know if they are well. Look them over. Watch for symptoms of colds. Watch for fever. See that they are dressed to fit the weather.

Inspect Your School.—Insist that a morning inspection of pupils be held at the school your child attends, preferably by physician or nurse.

Inspect Your Place of Business.—If any employees show signs of illness, send them home at once. Allow no overcrowding either by employees, customers or visitors. Insist on perfect ventilation.

Inspect Your Community.—Make sure that your local board of health has employed a competent health officer and that he is working at the job. Don't be afraid to criticize, but be sure that your criticism is constructive.

Doctors Supplied.

It is the hope of the State Board of Health that the time will never again come when the people of Kansas will be unable to find physicians in the face of such terrible need as was manifested in last year's epidemic of influenza. The board has now a list of physicians and nurses who have pledged themselves, in case of a recurrence of the epidemic, to go to stricken communities for service.

These workers will be under the direction of the U. S. Public Health Service, and their salaries will be fixed by that bureau. The expense will be borne by the communities whom they serve, of course, paid by appropriation from the general fund or some special fund, but instead of paying salaries direct to the workers the matter will be handled through the special agent of the United States Public Health Service.

A Health Program for Schools.

In no place is watchful care against the transmission of contagion so important as in the public school.

There the contact is close, it is uninterrupted for long periods, it occurs at a susceptible age period, and the parties concerned are either too young to appreciate their danger or too much afraid of a rebuke to mention it.

There should be a daily health inspection in every school no matter how small. In seasons of disease epidemics this inspection should take place at the door of the school and the children should not even be permitted to mingle together on the playground until they have passed it.

If no physician or school nurse is available for this inspection it may be made by the teacher, who will follow the principle: "In case of doubt take the safe side." She may exclude from school some children who could attend in safety to the others, but the important thing is to be quite sure that she excludes the infected one who would spread disease.

After this morning inspection the teacher should emphasize important points of general hygiene. She should explain the danger of interchanging pencils, of passing candy and other things from mouth to mouth, and of the use of the common drinking cup and the common towel. Such an inspection will not only save the child from contracting disease at school, it will also develop his ideas so that he will be better prepared to protect himself in the home and at other places.

Treatment Advised by U. S. Public Health Service.

It is very important that every person who becomes sick with influenza should go home at once and go to bed. This will help keep away dangerous complications and will, at the same time, keep the patient from scattering the disease far and wide. It is highly desirable that no one be allowed to sleep in the same room with the patient. In fact no one but the nurse should be allowed in the room.

If there is cough and sputum or running of the eyes and nose, care should be taken that all such discharges are collected on bits of gauze or rag, or paper napkins, and burned. If there is diarrhea, great care should be taken to prevent spreading the disease through soiling of the hands, clothing, or bed linen. Practically the same precautions that a nurse takes when attending a case of typhoid fever should then be instituted. If the patient complains of fever and headache he should be given water to drink, a cold compress to the forehead, and a light sponge bath. Only such medicine should be given as is prescribed by the doctor. It is foolish to ask the druggist to prescribe, and may be dangerous to take so-called "safe, sure, and harmless" remedies advertised by patent medicine manufacturers.

If the patient is so situated that he can be attended only by some one who must also look after others in the family, it is advisable that such attendant wear a wrapper, apron, or gown over the ordinary house clothes while in the sick room, and slip this off and wash and disinfect his hands when leaving to look after the others. The patient should have separate dishes, and these should be sterilized with *boiling* water after use.

Nurses and attendants will do well to guard against breathing in dangerous disease germs by wearing a simple fold of gauze or mask while near the patient.

First Aid.

Corporal Johnson,
Negro, six feet,
Hard on the heels of
The German retreat,
Leading his company
Suddenly fell,
Consigning all Prussians
Directly to Hell.

Past swept his fellows,
Shouting with glee,
Corporal Johnson
Bound up his knee,
Smashed by a bullet;
Sat in the muck
Grunting about his
" 'Post'ous tough luck!"

Darkness; no supper;
Knee ached like sin;
No Red Cross "trotters"
To carry him in;
Corporal Johnson,
Almost distraught,
All of a sudden
Beamed at a thought.

Fumbled his pockets;
Eats? Cigarette?
No. To the soldier
More soothing yet,
Little harmonica,
Battered and smeared;
Yet, as he mouthed it,
Its disappeared.
Dawn; and the searchers
Heard "jazzing" thin—
"Strutter's Ball!"—"Yankee!"
"Let's bring him in!"
Grinned at his hearers;
"Ah bids yo' good day!"
And Corporal Johnson
Fainted away.

—*Harold Willard Gleason.*

Where ?

Where did you come from, baby dear?
Out of the everywhere into the here.

Where did you get your eyes of blue?
Out of the sky as I came through.

What makes the light in them sparkle and spin?
Some of the starry spikes left in.

Where did you get that little tear?
I found it waiting when I got here.

What makes your forehead so smooth and high?
A soft hand stroked it as I went by.

What makes your cheeks like a soft white rose?
Something better than anyone knows.

Whence that three-cornered smile of bliss?
Three angels gave me at once a kiss.

Where did you get that pearly ear?
God spoke and it came out to hear.

Where did you get those arms and hands?
Love made itself into hooks and bands.

Feet, whence did you come, you darling things?
From the same box as the cherub's wings.

How did they all just come to be you?
God thought about me, and so I grew.

But how did you come to us, you dear?
God thought of you, so I am here.

—*Song from "At the Back of the North Wind."*

WHAT CAN WE DO FOR YOU, FIRST, ON EARTH?
PROTECT MY HERITAGE, RECORD MY BIRTH.

—*Montana Bulletin.*

BULLETIN

OF THE

Kansas State Board of Health.

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S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

October, 1919

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"I'll study and get ready and then maybe the chance will come."
—Abraham Lincoln.

Happiness is a habit, cultivate it.

Regeneration is a process, not an event.

The impossible—you can't kill a dead one.

Ultimately, there is but one hope for the future of civilization—the Christian religion.

There are large numbers of Kansas people who are suffering from a new disease—
Oleocephalus!

Cæsar's famous "*Veni, vidi, vici!*" had nothing on the message of this doughboy who recently returned from France and telegraphed enthusiastically to the folks at home, "Deloused, demobilized and delighted."

The great outstanding fact of the epidemic is this: despite the frightful toll of influenza, the death rate for the year 1918 was no higher than in the years before the various states had established special departments to safeguard the public health.—*Connecticut Health Bulletin.*

MORBIDITY REPORT FOR SEPTEMBER, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Poliomylitis (epidemic).	Influenza.	Other Diseases (see Addenda).
Lincoln.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Linn.....	2	0	0	1	0	0	0	0	0	0	0	0	0	0
Logan.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia.....	1	0	2	0	0	0	0	0	3	0	0	0	0	2
Marion.....	2	0	0	2	0	0	2	1	0	1	0	0	3	0
Marshall.....	0	0	6	5	0	0	0	0	0	0	0	0	1	0
McPherson.....	0	0	2	0	0	0	0	0	1	0	0	0	0	0
Meade.....	0	1	0	1	0	0	1	0	0	1	0	0	1	0
Miami.....	3	0	0	0	0	0	1	0	0	0	0	0	0	0
Mitchell.....	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Montgomery, except Coffeyville.....	5	0	3	0	0	0	1	1	0	0	0	0	0	2
Independence.....	5	1	8	3	0	0	3	0	0	0	0	0	0	0
Morris.....	0	1	2	1	0	0	0	0	0	0	0	0	0	0
Morton.....	1	0	0	3	0	0	0	0	0	0	0	0	0	0
Mortons.....	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Nemaha.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Neosho, except Chanute.....	0	0	0	7	0	0	0	1	0	0	0	0	1	1
Ness.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton.....	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Osage.....	0	0	0	5	0	0	0	0	0	0	0	1	0	0
Osborne.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa.....	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Pawnee.....	2	0	0	0	0	0	0	1	2	0	0	0	1	8
Phillips.....	0	7	1	0	0	0	0	0	0	0	0	0	0	0
Pottawatomie.....	0	0	3	0	0	0	0	0	0	0	0	0	2	1
Pratt.....	3	0	0	9	1	0	0	0	0	0	0	0	1	1
Rawlins.....	0	12	0	0	0	0	0	0	6	0	0	0	1	0
Reno, except Hutchinson.....	0	1	0	0	0	0	0	0	0	0	0	1	0	2
Republic.....	4	0	3	1	0	0	0	1	0	1	0	0	0	17
Rice.....	0	0	0	1	0	0	0	0	0	1	0	0	0	1
Riley, except Manhattan.....	3	0	0	2	0	0	0	0	2	0	0	0	1	3
Rooks.....	0	0	1	0	0	0	3	0	0	0	0	0	0	1
Rush.....	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Russell.....	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Saline, except Salina.....	2	0	3	0	0	0	0	0	0	0	1	0	0	0
Scott.....	2	0	0	1	0	0	0	1	1	0	0	0	0	10
Sedgwick, except Wichita.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seward.....	0	2	4	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except Topeka.....	12	2	4	3	0	1	13	1	2	0	0	1	4	83
Sheridan.....	0	0	2	0	0	0	0	0	0	0	0	0	2	0
Sherman.....	0	0	0	0	1	2	3	1	0	2	0	0	0	9
Smith.....	0	0	8	0	0	0	0	0	0	0	1	0	10	38
Stafford.....	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Stanton.....	0	5	0	2	0	0	4	1	0	0	0	0	0	0
Stevens.....	1	0	0	0	0	0	0	0	0	0	0	0	2	0
Sumner, except Wellington.....	0	0	1	5	0	0	0	1	2	0	0	0	3	0
Thomas.....	1	1	4	1	0	0	0	0	1	0	0	0	2	1
Trego.....	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Wabaunsee.....	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Wallace.....	0	0	1	1	0	0	0	0	0	0	0	0	0	1
Washington.....	0	0	0	1	0	0	0	0	1	0	0	0	1	3
Wichita.....	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Wilson.....	1	3	1	6	1	0	0	0	7	1	0	0	0	0
Woodson.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except Kansas City.....	0	0	2	2	0	0	0	0	0	0	0	0	0	0
Rosedale.....	5	0	6	7	0	0	1	3	2	3	1	0	7	70
	0	0	0	0	0	0	0	0	0	0	0	0	0	3

ADDENDA.

No report.

Other communicable diseases: Actinomycosis, 1; Cancer, 29; Chancroid, 3; Erysipelas, 3; Gonorrhœa, 255; Malaria, 4; Ophthalmia Neonatorum, 1; Pellagra, 1; Septic Sore Throat, 2; Syphilis, 114; Tetanus, 3; Tonsillitis, 1; Trachoma, 17.

A Letter—and a Warning.

TO THE YOUNG MEN OF KANSAS:

Dear Friends—As I lay here in my bed of pain I wish to give a word of warning to *you*! It is just one year ago that I was well and able to do a man's work and I was like all other young men. I thought the only way to have a good time was to lead a fast life. I would not heed the warning of friends, but kept on going my own way, till at last I caught a disease that has brought me down nearly to death's door. I have lost all control of my kidneys and bowels and have no use of my legs, but still linger on suffering agony in payment of just a few minutes of what boys call a good time. So, young men, take warning from this true letter and look where you are headed and avoid a fate like mine.

The man who wrote the above letter suffers from a disease known as syphilitic paraplegia. This is a paralysis of his limbs, and of the control of his bowels and urine. He cannot use his legs, although they contort and jerk of their own accord. He can feel nothing that touches them, but suffers from referred pains elsewhere. Many times a day his bowels move and urine escapes from him involuntarily. An immense ulcer has eroded its way through his hip into the rectum and pus pours out onto his back and also into the rectum. Meanwhile this man's eyesight is rapidly failing, and he is going blind. *But his mind remains perfectly clear*, so that these horrible tortures lose none of their frightfulness for want of comprehension.

This man acquired syphilis many years ago. Syphilis of the nervous system lies latent, which means that it shows no evidence whatever, for years, and then suddenly appears in some form or other, an example of which has just been described.

This calamity could have been prevented *three times*, and each opportunity was lost. The original infection could have been prevented, had the man known fully the consequences. Ninety percent of prostitutes are infected with syphilis! Secondly, it could have been prevented by prompt treatment after the infection, and a correct diagnosis had been made. Many people acquire syphilis innocently, and many of them never know they have acquired it. Some excellent physicians, in the past, have failed to diagnose very obvious cases. Thirdly, if vigorous enough treatment specially adapted to syphilis of the nervous system had been given *as soon as symptoms developed*, the present sad condition might have been partially, at least, avoided.

New Regulations.

At a regular meeting of the State Board of Health, held in Topeka, October 18, 1919, the following regulations were unanimously adopted and ordered to be published in the official state paper:

RULE XXVI-A.—INFLUENZA.

(a) All cases must be reported to the health officer within twenty-four hours. If no physician is called, the head of the house must report.

(b) The house must be placarded.

(c) All members of the family, not engaged in imperative business, must remain on the premises.

(d) Wage earners may be exempted from quarantine provided the patient is isolated in a room to himself, and the wage earner remain out of the sick room and have written permission from the health officer to come and go upon the premises.

(e) All patients afflicted with the disease must be strictly isolated, coming in contact with no one except the necessary nurse or attendant.

(f) No one is permitted to enter the premises except the attending physician and those who enter as nurses or nurses' attendants.

(g) Nurses or nurses' attendants before entrance must be furnished with instructions to prevent contracting the disease (which instructions may be received from attending physician or from the local health officer) and must be given permission to enter by attending physician.

(h) Quarantine of patients will be continued for five days after temperature has reached normal. Quarantine of contacts or exposed persons must continue for five days after date of last exposure.

(i) Fumigation of premises is unnecessary and impracticable. Families, however, are urged to see that every room has thorough sunning and airing.

RULE XXXVII-A.

No person afflicted with a venereal disease (gonorrhea, syphilis or chancroid) in an infectious stage shall be permitted to attend, teach or be otherwise employed in any private, parochial or public school.

STERILIZATION OF PUBLIC FOOD AND DRINKING UTENSILS.

WHEREAS, It is known that certain dangerous communicable diseases are transmitted through and by the secretions of the upper respiratory tract: therefore, be it

Resolved, That all glasses, cups, spoons, forks, knives or other utensils used in serving food or drink to the public that come in contact with the lips or mouth shall be sterilized and adequately protected from contamination before each service.

Provided, In lieu of sterilization, utensils which are destroyed after service to one individual may be used.

ABOLITION OF THE COMMON TOWEL.

No person or corporation shall place, furnish or keep in place in any hotel, restaurant, mercantile establishment, manufacturing establishment, theater, dance hall, railway train, railway station, public or private school,

or any other public place any towel for the common public use, and no person or corporation in charge or control of any such place shall permit in such place the use of the common towel.

The term "common towel" as used herein shall be construed to mean roller towels or towels intended or available for common use by more than one person without being laundered after such use.

ABOLITION OF THE COMMON DRINKING CUP.

WHEREAS, It has been repeatedly demonstrated that the use of what is usually known as the common drinking-cup is dangerous and is an undoubted source of communication of infectious disease: now, therefore, in the interest of the public health, be it

Ruled by the Kansas State Board of Health, That the use of the common drinking-cup on railroad trains, in railroad stations, in the public and private schools and the state educational institutions of the state of Kansas, in hotels, restaurants, mercantile establishments, manufacturing establishments, theatres, picture shows, dance halls or any other public place, is hereby prohibited.

Report of Division, Water and Sewage.

PERMITS FOR WATERWORKS AND SEWERAGE WORK.

Permits issued since July 1, 1919, after examination of local conditions by Engineer, State Board of Health, and approval of plans and specifications:

Place, Date and Nature of Improvement.

Potwin. July 15, 1919. Sewer system and sewage disposal plant.
 Lewis. July 23, 1919. Waterworks plant; supply from wells.
 Sharon Springs. Aug. 5, 1919. New wells; extension to existing plant.
 Enterprise. Aug. 23, 1919. Sewer system; new.
 Elk City. Aug. 23, 1919. Waterworks and water purification plant; supply from Elk river.
 Chapman. Aug. 25, 1919. Sewer system; new.
 Belle Plaine. Aug. 25, 1919. Sewer system; new.
 Potwin. Sept. 2, 1919. Sewer system; new.
 Hiawatha. Sept. 4, 1919. Sewer extensions.
 Arkansas City. Sept. 9, 1919. Sewer extensions.
 Pretty Prairie. Sept. 24, 1919. Waterworks; new supply from wells.
 Dodge City. Sept. 26, 1919. Sewer extensions.
 Abilene. Sept. 26, 1919. Sewer extensions.
 Burns. Oct. 13, 1919. Waterworks; new.

PLANS RECEIVED FOR WATERWORKS AND SEWERAGE WORK.

Place and Nature of Improvement.

Marysville. Sewer extensions.
 Midian. Water supply (Empire Gas & Fuel Co., Little Arkansas river).
 Oak Hill. Water supply (Empire Gas & Fuel Co., Little Arkansas river).
 Cedarvale. Sewer system and sewage disposal plant.
 Valley Center. Water works; supply from wells.
 Herington. Sewer extensions.
 Florence. Extensions to waterworks plant.
 Florence. Sewer system; new.
 Eldorado. Extension to sewer system.

Baxter Springs. Waterworks improvements.
 Wamego. Sewer extensions.
 Oswego. Waterworks improvements.
 Dodge City. Waterworks improvements.
 Lyons. Waterworks improvements.
 Oxford. Waterworks improvements.
 Caldwell. Waterworks improvements.
 Russell. Engineer's report on sewer system.

WATER LICENSES ISSUED SINCE JULY 1, 1919.

RAILROADS.

Licenses are issued after satisfactory analysis of sample of water and inspection of source by representative of department. Water to be used on interstate carriers, effective to January 1, 1920.

Atchison, Topeka & Santa Fe.—Atchison, city supply, October 18; Abilene, city supply, August 27; Colony, well, October 2, certificate refused; Colony, cistern, August 11, certificate refused; Gridley, well, September 9, certificate refused; Englewood, well, September 19; Hutchinson, city supply, August 11; Independence, city supply, August 11; Kansas City, city supply, August 19; McPherson, city supply, August 11; Minneapolis, city supply, August 11; Newton, city supply, August 23; Pratt, city supply, August 19; Sand Creek, hauled from Newton, September 9; Topeka, city supply, August 11; Winfield, city supply, August 11.

Rock Island.—Bucklin, city supply, September 24; Horton, well, September 24; Liberal, well, August 11; Pratt, city supply, August 19; Topeka, city supply, August 11.

Missouri Pacific.—Atchison, city supply, October 18; Council Grove, city supply, September 5; Horace, Selkirk well, September 24; Marquette, well, August 28; Madison, city supply, August 13; McPherson, city supply, August 11; Osawatimie, city supply, October 8; Sedan, city supply, August 19, certificate refused; Topeka, city supply, August 11.

Union Pacific.—Beloit, well, August 19; Junction City, city supply, August 19; Kansas City, city supply, August 19; McPherson, well, August 11, certificate refused; Topeka, city supply, August 11; Ellis, well, October 8; McPherson, city supply, October 8; Manhattan, well, August 27.

Anthony & Northern.—Pratt, city supply, August 19.

Arkansas Valley Interurban.—Hutchinson, city supply, August 11; Newton, city supply, August 23.

Kansas City, Kaw Valley & Western.—Bonner Springs, city supply, October 16.

Chicago, Burlington & Quincy.—Atchison, city supply, October 18.

Kansas City Northwestern.—Kansas City, city supply, August 19.

Kansas City Southern.—Pittsburg, city supply, August 19.

Missouri, Kansas & Texas.—Junction City, city supply, August 19; Burlington, city supply, October 9.

St. Louis & San Francisco.—Pittsburg, city supply, August 19.

St. Joseph & Grand Island.—Hiawatha, city supply, October 18.

BOTTLED WATERS.

Licenses effective to July 1, 1920. Licenses issued after satisfactory analysis of sample in laboratory of Division.

Crystal Springs Bottling Works, Coffeyville, September 8.

Dew Drop Water Co., Eldorado, August 16.

Polar Water Company, Eldorado, August 16.
 French Lick Hotel Company, French Lick, Ind., September 3.
 H. T. Jensen, Fort Scott, July 18.
 T. J. Bixler, Hutchinson, August 5.
 Aganippe Springs Water Co., Independence, August 19.
 Crazy Well Water Co., Mineral Wells, Tex., August 28.
 Manitou Mineral Water Co., Manitou, Colo., July 31.
 Rock Heart Mineral Water Co., Parsons, August 25.
 Veronica Medicinal Spg. W. Co., Santa Barbara, Cal., September 10.
 Sycamore Mineral Springs, Sabetha, September 3.
 J. Law More, Turner, August 13.
 Topeka Pure Water Co., Topeka, August 5.
 Waconda Sanitarium, Waconda Springs, August 13.
 White Rock Mineral Water Co., Waukesha, Wis., August 19.
 Distilled & Aërated Water Co., Wichita, July 31.

MANUFACTURED ICE.

Licenses effective to January 1, 1920. Licenses issued after satisfactory analysis of sample in laboratory of Division.

Belle Springs Creamery Co., Abilene, February 3.
 Alma Light & Ice Company, Alma, June 23.
 Anthony Ice & Salt Co., Anthony, February 25.
 Railways Ice Company, Argentine, July 31.
 Arkansas Ice & C. S. Co., Arkansas City, April 8.
 Henneberry & Co., Arkansas City, March 12.
 Crystal Ice & Fuel Co., Atchison, April 8.
 Home Ice & C. S. Co., Atchison, May 7.
 Augusta Ice Co., Augusta, July 14.
 Blue Rapids Ice Co., Blue Rapids, July 31.
 Bonner Elec. & Mfg. Co., Bonner Springs, August 11.
 Farmers Ice & Produce Co., Buhler, February 13.
 W. A. Bowden, Burden, August 11.
 City Meat Market, Bushton, July 31.
 Caldwell Crystal Ice & C. S. Co., Caldwell, July 23.
 Caney Ice & C. S. Co., Caney, June 23.
 Miller & Griswold, Canton, July 1.
 Chanute Ice & Light Co., Chanute, May 15.
 Hasler & Leatherman, Chapman, February 3.
 Cherryvale Ice & C. S. Co., Cherryvale, February 3.
 Chetopa Ice & Bottling Co., Chetopa, October 20.
 Shepard & Chain Ice Co., Coffeyville, September 2.
 Columbus Ice Company, Columbus, June 3.
 Concordia Ice & C. S. Co., Concordia, February 13.
 Frantz Ice Co., Conway Springs, July 31.
 Home Light & Power Co., Cottonwood Falls, February 3.
 Morris County Light & Power Co., Council Grove, May 7.
 Midland Water Light & Ice Co., Dodge City, March 12.
 Artificial Ice Company, Downs, August 21.
 Eldorado Elec. & Refrig. Co., Eldorado, September 2.
 Weber Elec. Power Co., Ellsworth, June 23.
 Emporia Ice & C. S. Co., Emporia, March 12.
 Crystal Ice & Bottling Co., Erie, July 14.
 Henry Hagenbuch & Son, Eudora, July 23.
 Eureka Elec. & Ice Co., Eureka, July 23.
 Fort Scott Mfg. Co., Fort Scott, July 23.
 O'Connor & Hamlin Ice Co., Fort Scott, February 13.
 Fredonia Light & Ice Co., Fredonia, May 7.
 Menghini Bros., Frontenac, May 7.
 Union Ice & Fuel Co., Galena, July 1.
 Garden City Ice Co., Garden City, July 14.

Goodland Ice & Coal Co., Goodland, May 15.
Crystal Ice Company, Harper, May 7.
Haven Light & Ice Co., Haven, June 12.
Felton Pure Ice Co., Hays, May 7.
Herington Ice Co., Herington, June 12.
Hesston Creamery & Ice Co., Hesston, September 10.
Hiawatha Light, Power & Ice Co., Hiawatha, June 12.
Peoples Ice & Storage Co., Holton, October 9.
Humboldt Ice Co., Humboldt, June 18.
Carey Salt Company, Hutchinson, October 9.
Hutchinson Ice Co., Hutchinson, February 13.
Iola Ice & Cold Storage Co., Iola, February 13.
Union Light & Power Co., Junction City, March 12.
Alpine Ice Co., Kansas City, May 15.
Armour & Company, Kansas City, February 25.
Crystal Springs Ice, Gr. & Fuel Co., Kansas City, June 18.
Kaw Valley Ice & C. S. Co., Kansas City, May 7.
Kingman Ice & Creamery Co., Kingman, September 2.
Kiowa Ice & C. S. Co., Kiowa, June 12.
La Harpe Ice Company, La Harpe, July 23.
Medicine Valley Grain Co., Lake City, August 11.
C. W. Smith Elec. Co., Larned, June 12.
Ice & Storage Co., Lawrence, May 7.
Consumers Ice Co., Leavenworth, May 7.
Crystal Ice Co., Leavenworth, September 2.
D. S. Ryan, Leavenworth, June 23.
Liberal Light, Ice & Power Co., Liberal, September 2.
J. C. Cooper, Lincoln, July 14.
M. L. Bratton, Luray, July 14.
McPherson Creamery & Ice Co., McPherson, April 8.
Berger & Son, Mt. Hope, April 8.
Huse & Page, Manhattan, October 9.
Manhattan Elec. & Gas Co., Manhattan, March 12.
Marysville Ice & C. S. Co., Marysville, June 18.
Moxley & Dobson, Medicine Lodge, May 15.
Moline Creamery, Moline, August 11.
Polar Ice Co., Moundridge, May 15.
Mulvane Ice & C. S. Co., Mulvane, September 10.
Neodesha Crystal Ice Co., Neodesha, May 7.
Newton Ice & C. S. Co., Newton, June 23.
Norton Ice Co., Norton, March 12.
W. M. Prather, Oakley, June 12.
City Ice & Storage Co., Olathe, July 31.
Onaga Light, Heat & Power Co., Onaga, May 7.
Farmers Coöperative Creamery, Osage, April 8.
Osawatomie Ice Co., Osawatomie, June 18.
Moxley & Company, Oskaloosa, July 31.
Citizens Ice Co., Oswego, September 10.
B. D. Bennett, Ottawa, July 31.
Paola Crystal Ice Co., Paola, September 10.
Parsons C. S. & Crystal Ice Co., Parsons, May 15.
Peabody Light, Heat & Power Co., Peabody, February 13.
Hull & Dillon, Pittsburg, July 31.
Standard Ice & Fuel Co., Pittsburg, April 8.
Pratt Ice & Coal Co., Pratt, July 1.
Anton Smetana, Russell, July 31.
St. John Mills, St. John, July 23.
T. J. Pace, Sabetha, April 8.
Kansas Ice & Storage Co., Salina, February 3.
Sedan Crystal Ice Co., Sedan, July 31.
Nemaha Butter & Ice Co., Seneca, August 11.

Skaggs & Kreps, Sylvan Grove, August 21.
 Beatrice Creamery Co., Topeka, February 13.
 Mutual Ice & C. S. Co., Topeka, April 8.
 Seymour Packing Co., Topeka, August 11.
 Topeka Cold Storage & Ice Co., Topeka, February 25
 Charles Wolf Packing Co., Topeka, February 13.
 L. E. Barnes, Vermillion, May 7.
 Union Ice & C. S. Co., Weir City, June 12.
 Wellsville Elec. Lt. & Ice Co., Wellsville, May 7.
 Jones & Gill, White Water, October 20.
 Crystal Ice & Fuel Co., Wichita, July 31.
 Jacob Dold Packing Co., Wichita, April 8.
 Steffen-Bretch Ice & C. S. Co., Wichita, May 7.
 Wichita Ice & C. S. Co., Wichita, June 18.
 F. C. Klemm, Wilson, June 23.
 Winfield Ice & C. S. Co., Winfield, May 15.
 Yates Center Ice & C. S. Co., Yates Center, May 27.

NATURAL ICE.

H. B. Leachs & Son, Alton, March 12.
 J. W. Duley, Beloit, June 23.
 Mulberry Ice Co., Beloit, August 11.
 John Lee, Bennington, July 14.
 Allerdice & Quinn, Blue Rapids, May 15.
 C. W. Holte, Cawker City, May 7.
 Lyss Smith & Co., Cawker City, June 12.
 H. O. Pinkston, Cedar Point, April 8.
 S. J. Doyle, Delphos, February 3.
 J. M. Tarleton, Eudora, May 7.
 T. P. Wheatley, Gypsum, April 8.
 W. G. Kelley, Horton, May 7.
 Jacob Bibbs, Industry, May 7.
 Kenlock F. Jones, Industry, September 10.
 H. D. Cullison, La Cygne, July 23.
 W. L. Turner, Lenora, June 23.
 A. L. Doud, Lyndon, April 8.
 Underhill & Son, Mound City, August 11.
 Fred L. Acker, Norcatur, April 8.
 E. L. Lloyd, Osage, May 15.
 Farmers Merc. Co., Otego, June 12.
 • City Meat Market, Randolph, July 1.
 C. J. De Witt, Ransom, February 13.
 Ralph VanBibber, Troy, September 2.
 Moxley, Clark & Co., Valley Falls, May 7.
 C. H. Philbrook, Washington, May 15.

LICENSES REFUSED.

Bennington & Co., Admire, April 4.
 T. P. Ray, Downs, March 28 (Mr. Ray's manufactured ice was licensed).
 Geo. McCargar, Fostoria, March 22.
 Hays & Hagadorn, Gaylord, June 3.
 J. G. DeBolt, Glasco, April 2.
 R. B. Thomas, Hays, March 31.
 J. N. Welty, Hill City, June 13.
 Herbert Hickman, Kirwin, July 10.
 W. A. Twogood, La Cygne, March 15.
 Skelton & Hammond, Long Island, May 19.
 S. B. Winchester, Marion, March 28.
 I. W. Ireys, Melvern, July 11.
 Melvern Ice Co., Melvern, March 22, Aug. 16.

J. W. King, Morganville, April 8.
 E. W. Allen, Muscotah, April 4.
 Charles Ellson, Muscotah, April 4.
 T. V. Bailey, Reading, June 12.
 T. F. Wanzer, Simpson, April 5.
 Rogers Ice Co., Smith Center, March 31.
 D. Fogle Merc. Co., Williamsburg, March 9.

RECORD OF ANALYSES.

MADE IN WATER AND SEWAGE LABORATORY, KANSAS STATE BOARD OF HEALTH, JULY 1, 1915-JUNE 30, 1919.

(Includes city supplies, proposed city supplies, public health, private wells, miscellaneous samples for special investigations, railroad waters, bottled waters, ices, etc.)

	1915-16.	1916-17.	1917-18.	1918-19.
Bacteriological.....	5,895	5,616	4,772	5,641
Chemical.....	791	669	585	512
Ice.....	192	238	143	225
Microscopical.....	68	11	1	0
Refinery waste.....	3	68	48	0
Alum (Filter).....	9	5	3	0
Boiler scale.....	2	0	2	0
Filter test.....	2	0	9	0
Boiler water.....	4	13	3	5
Sand.....	20	33	28	19
Sewage.....	7	0	7	13
Ice supply.....	5	18	6	33
Algae.....	9	61	6	1
Hypochlorite of lime.....	2	2	0	1
Lime.....	0	1	0	0
Oil.....	0	1	191	11
Salt.....	0	0	1	0
Totals.....	7,009	6,736	5,805	6,461

Food Analysis LXII.

STATE FOOD LABORATORY—E. H. S. BAILEY, *Director*; W. S. LONG, *Chemist in Charge*.

BEVERAGES.

22690. "Cider." Great Bend, Kan. Alcohol, 6.57 percent.
 22695. "Non-Alcoholic Cordial." Danciger Bros., Kansas City, Mo. Alcohol, 0.65 percent.
 22696. "Non-Alcoholic Cordial." Danciger Bros., Kansas City, Mo. Alcohol, 0.65 percent.
 93211. "Menzol." Wm. Meitner, Olmitz, Kan. Manufacturer, National Beverage Co., St. Louis, Mo. Alcohol, 4.81 percent.
 93212. "Cider." Old Log Cabin Brand. Wm. Meitner, Olmitz, Kan. Manufacturer, Clarksville Cider Co., St. Louis, Mo. Alcohol, 6 percent.
 93213. "Cider." Wm. Meitner, Olmitz, Kan. Alcohol, 6.22 percent.
 92314. "Cream Brew." Fox Head Brand. Non-intoxicating. Jos. Presnitz, Olmitz, Kan. Manufacturer, Milwaukee-Waukesha Brewing Co., Waukesha, Wis. Alcohol, 2.01 percent.
 92315. "Cider." Crab Brand. Jacob Bisterfelt, Galatia, Kan. Manufacturer, Clarksville Cider Co., St. Louis, Mo. Alcohol, 4.89 percent.
 92316. "Cider." Jacob Bisterfelt, Galatia, Kan. Alcohol, 5.03 percent.
 92317. "Cider." Crab Brand. Jacob Bisterfelt, Galatia, Kan. Manufacturer, Clarksville Cider Co., St. Louis, Mo. Alcohol, 2.17 percent.

EXTRACTS.

81169. "Essence of Lemon." Wherrett-Mize Drug Co., Atchison, Kan. Passed.
 81170. "Extract Vanilla and Tonka." Wherrett-Mize Drug Co., Atchison, Kan. Very little true extract of vanilla present. Misbranded.
 92832. "Imitation Flavor of Vanilla." W. C. Smith, Ottawa, Kan. Jobber, Ottawa Wholesale Grocery Co., Ottawa, Kan.

92914. "Orange Extract." Kennedy Bros., Lebo, Kan. Manufacturer, Symms Grocery Co., Atchison, Kan. Passed.

92915. "Lemon Flavor with Oil." Kennedy Bros., Lebo, Kan. Manufacturer, The Symms Grocery Co., Atchison, Kan. Passed.

MILK.

216. "Milk." E. V. Green, Topeka, Kan. Formaldehyde present. Illegal.
 217. "Milk." E. V. Green, Topeka, Kan. Formaldehyde present. Illegal.
 218. "Milk." E. V. Green, Topeka, Kan. Formaldehyde present. Illegal.
 219. "Milk." E. V. Green, Topeka, Kan. Formaldehyde present. Illegal.
 220. "Milk." E. V. Green, Topeka, Kan. Formaldehyde present. Illegal.
 221. "Milk." Mr. Heffner, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 222. "Milk." Mr. Hamer, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 223. "Milk." Mr. Hamer, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 224. "Milk." Mr. Hamer, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 225. "Milk." Mr. Manning, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 226. "Milk." Mr. Manning, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 227. "Milk." Mr. Manning, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 228. "Milk." Mr. Manning, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 229. "Milk." Mr. Manning, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 230. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 231. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 232. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.5 percent. Nonfat solids, 6.8 percent. Watered. Illegal.
 233. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 234. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 235. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.9 percent. Illegal.
 236. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 237. "Milk." G. A. Stanwix, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.8 percent; nonfat solid, 7.9. Watered. Illegal.
 238. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.5 percent; nonfat solids, 6.9 percent. Watered. Illegal.
 239. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.1 percent; nonfat solids, 6.4 percent. Watered. Illegal.
 240. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.5 percent; nonfat solids, 5.6 percent. Watered. Illegal.
 241. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.9; nonfat solids, 6.6. Watered. Illegal.
 242. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Suspicion of added water.
 243. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Added water suspected.
 244. "Milk." Raymond Diehl, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 1.9 percent. Illegal.
 245. "Milk." Raymond Diehl, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 1.8 percent. Illegal.
 246. "Milk." Raymond Diehl, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.6 percent. Illegal.
 247. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 248. "Milk." J. C. Herriot, Six Corners, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Passed.
 249. "Milk." Ray Diehl, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.2 percent; nonfat solids, 8.4 percent. Illegal.
 250. "Milk." Ray Diehl, Lawrence, Kan., retailer. The Kahn Creamery, Lawrence, Kan. Fat, 2.7 percent; nonfat solids, 8.4 percent. Illegal.
 1063. "Milk." The Kahn Creamery, Lawrence, Kan. Composite sample. Fat, 2.8 percent. Nonfat solids, 7.9 percent. Watered. Illegal.
 22713. "Milk." The Kahn Pure Milk Co., Lawrence, Kan. Fat, 2.3 percent. Illegal.
 22714. "Milk." The Kahn Pure Milk Co., Lawrence, Kan. Fat, 2.3 percent. Illegal.
 22715. "Milk." The Kahn Pure Milk Co., Lawrence, Kan. Composite of twenty cans. Fat, 2.8 percent. Nonfat solids, 8.3 percent. Watered. Illegal.
 92901. "Milk." J. H. Massey, Osawatomie, Kan. Passed.
 92902. "Milk." J. H. Massey, Osawatomie, Kan. Sample lost.
 92903. "Milk." J. H. Massey, Osawatomie, Kan. Fat, 3.1 percent. Nonfat solids, 7.8 percent. Watered. Illegal.

92904. "Milk." J. H. Massey, Osawatomie, Kan. Fat, 8.1 percent. Illegal.
 92905. "Milk." J. H. Massey, Osawatomie, Kan. Passed.
 92906. "Milk." J. H. Massey, Osawatomie, Kan. Passed.
 92907. "Milk." J. H. Massey, Osawatomie, Kan. Passed.
 92909. "Milk." J. H. Massey, Osawatomie, Kan. Nonfat solids, 7.8. Watered. Illegal.
 92910. "Milk." J. H. Massey, Osawatomie, Kan. Passed.
 92912. "Milk." J. H. Massey, Osawatomie, Kan. Fat, 8.1 percent. Illegal.
 92918. "Milk." A. F. Baker, Osawatomie, Kan. Fat, 8.2 percent.

VINEGAR.

50181. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50182. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50183. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50184. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50185. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50186. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 50187. "Pure Apple Vinegar." L. C. Shafer, Manhattan, Kan. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
 60703. "Cider Vinegar." Bittman-Todd Merc. Co., Leavenworth, Kan. Nebraska City Vinegar Co., Nebraska City, Neb. Ash low in alkalinity and phosphates.
 60704. "Cider Vinegar." Bittman-Todd Merc. Co., Leavenworth, Kan. Nebraska City Vinegar Co., Nebraska City, Neb. Ash low in alkalinity and phosphates.
 60705. "Cider Vinegar." Bittman-Todd Merc. Co., Leavenworth, Kan. Nebraska City Vinegar Co., Nebraska City, Neb. Ash low in alkalinity and phosphates.
 60706. "Cider Vinegar." Bittman-Todd Merc. Co., Leavenworth, Kan. Nebraska City Vinegar Co., Nebraska City, Neb. Ash low in alkalinity and phosphates.
 60707. "Cider Vinegar." Rohlfing Wholesale Grocery Co., Leavenworth, Kan. Speas Vinegar Mfg. Co., Kansas City, Mo. Ash low in alkalinity and phosphates.
 60708. "Cider Vinegar." Rohlfing Wholesale Grocery Co., Leavenworth, Kan. Speas Vinegar Mfg. Co., Kansas City, Mo. Ash low in alkalinity and phosphates.
 60709. "Cider Vinegar." Rohlfing Wholesale Grocery Co., Leavenworth, Kan. Speas Vinegar Mfg. Co., Kansas City, Mo. Ash low in alkalinity and phosphates.
 60710. "Cider Vinegar." Rohlfing Wholesale Grocery Co., Leavenworth, Kan. Speas Vinegar Mfg. Co., Kansas City, Mo. Ash low in phosphates.
 81172. "Vinegar." Kansas Wholesale Grocery Co., Coffeyville, Kan. Ash low in phosphates.
 81173. "Vinegar." Kansas Wholesale Grocery Co., Coffeyville, Kan. Ozark Cider and Vinegar Co., Rogers, Ark. Ash low in phosphates.
 81174. "Vinegar." Kansas Wholesale Grocery Co., Coffeyville, Kan. Ozark Cider and Vinegar Co., Rogers, Ark. Sample not received.
 81175. "Pure Apple Cider Vinegar." Banquet brand. The Iola Wholesale Grocery Co., Iola and Fredonia, Kan. Ash low in phosphates.
 81180. "Sunshine Vinegar." Chanute Wholesale Grocery Co., Chanute, Kan. Wayne Food Products Co., Marion, N. Y. Made from evaporated apple products. Reduced vinegar. Illegal.
 81181. "Sunshine Vinegar." Chanute Wholesale Grocery Co., Chanute, Kan. Wayne Food Products Co., Marion, N. Y. Same as 81180.
 81182. "Vinegar." Chanute Wholesale Grocery Co., Chanute, Kan. Speas Vinegar Manufacturing Co., Kansas City, Mo. Sample broken during transit.
 81185. "Imitation Apple Vinegar Colored." Chanute Wholesale Grocery Co., Chanute, Kan. Speas Vinegar Manufacturing Co., Kansas City, Mo. Contains added color and dilute acetic acid.

MISCELLANEOUS.

214. "Red Alaska Salmon." Sage Bros. Grocery, Topeka, Kan. The Theo. Poehler Mercantile Co., Topeka. Passed.
 215. "Double U Tomato Catsup." G. F. Sills, Topeka. The Theo. Poehler Mercantile Co., Topeka. High in yeasts, molds and bacteria. Illegal.
 253. "Lard." Rabe Bros., Topeka. Manhattan Packing Co., Manhattan, Kan. Passed.
 22681. "Golden Age Egg Noodles." The Cleveland Macaroni Co., Cleveland, Ohio. Passed.
 22687. "Honey." L. Dowell, Narka, Kan. E. B. Rosa, Monroe, Wis. Passed.
 22689. "Powdered Skim Milk." E. C. Gatlin Co., Kansas City, Mo.
 22697. "Marshmallow Creme." Hipolite Co., St. Louis, Mo. Unclaimed freight, Topeka. A mixture of sucrose, gelatin and commercial glucose.
 22704. "Malted Milk." Borden Condensed Milk Co., N. Y. Tully and McFarland, Topeka. Passed.
 22705. "Milkose Malted Milk." The Milkose Co., Chicago. Rosser Bros., Topeka. Passed.
 22706. "Ice Cream." Bodine and Johnson, Kansas City, Kan. Fat, 8.0 percent. Geo. Atwood, Kansas City, Kan., manufacturer. Illegal.

50120. "Milkose Malted Milk." The Milkose Co., Chicago. R. L. Howard, Osawat-
tomie, Kan. Passed.
50122. "Crushed Cherries." Maid of Honor Brand. The McPike Drug Co., Kansas
City, Mo. W. E. Gsell, Paola, Kan. Artificially colored and flavored.
22726. "Artificial Cherry Cider." R. T. McAuley, Wichita, Kansas.
50138. "Peanut-Honey Butter." Marvin Food Co., Marion, Ohio.
50174. "Acidine." Sethness Co., Chicago. Concordia Bottling Works, Concordia,
Kan. A solution of phosphoric acid.
92833. "Honey." Ridenour-Baker Grocery Co., Kansas City, Mo. W. C. Smith,
Ottawa, Kan. Chemical analysis that of honey, but color and taste foreign to honey.
92839. "Eg-Like Cooking and Baking Compound." The Marwin Food Co., Marion,
Ohio. Ottawa Wholesale Groc. Co., Ottawa, Kan. Contains a large percent of dried egg.
92897. "Pineapple Syrup." Richardson, Rochester, N. Y. Nicholson and Lane,
Paola, Kan. Passed.
92898. "Strawberry Syrup." Richardson, Rochester, N. Y. Nicholson and Lane,
Paola, Kan. Passed.
92911. "Cream." A. F. Baker, Osawatome, Kan. Fat, 14.0 percent. Illegal.

Report of Food Laboratory, Kansas State Agricultural College.

June 30, 1918 to June 30, 1919. H. H. KING, *Director*. F. S. CAMPBELL, *Analyst*.

JULY, 1918.

- Insp. No. 92810a. Ice cream. Franklin Ice Cream Co., K. C., Mo., producer. Mo.
Dairy Store, Camp Funston, Kan., retailer. Fat, 10.0. Illegal.
- Insp. No. 92811a. Ice cream. Franklin Ice Cream Co., K. C., Mo., producer. Louis
Charowhas, Army City, Kan., retailer. Fat, 10.2. Illegal.
- Insp. No. 92812a. Ice cream. Franklin Ice Cream Co., K. C., Mo., producer. E. G.
Bell, Army City, Kan., retailer. Fat, 10.3. Illegal.
- Insp. No. 92813a. Ice cream. Palace Drug Co., Manhattan, Kan., producer. Palace
Drug Co., Manhattan, Kan., retailer. Fat, 10.2. Illegal.

OCTOBER, 1918.

- Insp. No. 81123. Ice cream. N. A. Wilson, Parsons, Kan., producer. N. A. Wilson,
Parsons, Kan., retailer. Fat, 14.0. Passed.
- Insp. No. 81124. Ice cream. N. A. Wilson, Parsons, Kan., producer. N. A. Wilson,
Parsons, Kan. No report.
- Insp. No. 81125. Milk. W. F. Kock, Parsons, Kan., producer. W. F. Kock, Parsons,
Kan., retailer. Fat, 4.2. Passed.
- Insp. No. 81126. Ice cream. Pappas Brothers, Parsons, Kan., producers. Pappas
Brothers, Parsons, Kan., retailers. Fat, 14.4. Passed.
- Insp. No. 81127. Milk. R. F. Wilson, Parsons, Kan., producer. R. F. Wilson, Par-
sons, Kan., retailer. Fat, 4.4. Passed.
- Insp. No. 81128. Milk. J. W. Sayler, Parsons, Kan., producer. J. W. Sayler, Par-
sons, Kan., retailer. Fat, 3.9. Passed.
- Insp. No. 81129. Ice cream. J. Currigan, Parsons, Kan., producer. Dryden Phar,
Parsons, Kan., retailer. No sample received.
- Insp. No. 81130. Milk. H. A. Wilson, Parsons, Kan., producer. H. A. Wilson, Par-
sons, Kan., retailer. Fat, 3.8. Passed.

JANUARY, 1919.

- Insp. No. 92861. Sausage. I. H. Hershey, Olathe, Kan., producer. I. H. Hershey,
Olathe, Kan., retailer. Moisture, 41.11. Cereal, trace.
- Insp. No. 92862. Sausage. Olathe Pkg. Co., Olathe, Kan., producer. Olathe Pkg.
Co., Olathe, Kan., retailer. Moisture, 35.34. Cereal, 0.07.
- Insp. No. 92863. Sausage. The Grange Store, Olathe, Kan., producer. The Grange
Store, Olathe, Kan., retailer. Moisture, 45.48. Cereal, 0.12.
- Insp. No. 92864a. Milk. J. H. Massey, Osawatome, Kan. Fat, 2.9. Solids not fat,
7.46. Illegal.
- Insp. No. 92865a. Milk. J. H. Massey, Osawatome, Kan., Fat, 4.0. Solids not fat,
9.36. Passed.
- Insp. No. 92866a. Milk. J. H. Massey, Osawatome, Kan. Fat, 2.6. Solids not fat,
8.40. Illegal.
- Insp. No. 92869a. Milk. J. H. Massey, Osawatome, Kan. Fat, 4.6. Solids not fat,
9.35. Passed.
- Insp. No. 92870a. Milk. J. H. Massey, Osawatome, Kan. Fat, 4.6. Solids not fat,
9.55. Passed.
- Insp. No. 92871a. Milk. J. H. Massey, Osawatome, Kan. Fat, 3.7. Solids not fat,
8.85. Passed.
- Insp. No. 92872a. Milk. J. H. Massey, Osawatome, Kan. Fat, 4.1. Solids not fat,
9.45. Passed.
- Insp. No. 92873a. Milk. J. H. Massey, Osawatome, Kan. Fat, 4.0. Solids not fat,
7.98. Substandard.

Insp. No. 92874a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.9.	Solids not fat, 8.58.	Passed.
Insp. No. 92875a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 4.3.	Solids not fat, 9.20.	Passed.
Insp. No. 92876a.	Milk.	J. H. Massey, Osawatomie, Kan.	Sample broken.		
Insp. No. 92877a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.8.	Solids not fat, 8.95.	Passed.
Insp. No. 92878a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.3.	Solids not fat, 7.08.	Substandard.
Insp. No. 92879a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 4.3.	Solids not fat, 9.40.	Passed.
Insp. No. 92880a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.5.	Solids not fat, 8.42.	Passed.
Insp. No. 92881a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.6.	Solids not fat, 8.68.	Passed.
Insp. No. 92882a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.6.	Solids not fat, 9.19.	Passed.
Insp. No. 92883a.	Milk.	J. H. Massey, Osawatomie, Kan.,	Fat, 3.9.	Solids not fat, 8.32.	
Insp. No. 92884a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.9.	Solids not fat, 10.61.	Passed.
Insp. No. 92885a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.8.	Solids not fat, 9.04.	Passed.
Insp. No. 92886a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.6.	Solids not fat, 9.23.	Passed.
Insp. No. 92887a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.6.	Solids not fat, 9.13.	Passed.
Insp. No. 92888a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.4.	Solids not fat, 8.80.	Passed.
Insp. No. 92889a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 3.8.	Solids not fat, 9.29.	Passed.
Insp. No. 92890a.	Milk.	J. H. Massey, Osawatomie, Kan.	Fat, 4.4.	Solids not fat, 8.91.	Passed.
Insp. No. 92891a.	Milk.	J. H. Massey, Osawatomie, Kan., retailer.	Fat, 3.4.	Solids not fat, 9.30.	Passed.
Insp. No. 92892a.	Milk.	J. H. Massey, Osawatomie, Kan., retailer.	Fat, 3.2.	Solids not fat, 9.05.	
Insp. No. 92893a.	Milk.	J. H. Massey, Osawatomie, Kan., retailer.	Fat, 3.7.	Solids not fat, 8.96.	Passed.
Insp. No. 60689.	Sausage.	J. Sopcie, Kansas City, Kan., retailer.	Moisture, 54.47.	Cereal, none.	
Insp. No. 60690.	Sausage.	Armour & Co., Kansas City, Mo., producers.	Joe Gresnik, Kansas City, Kan., retailer.	Moisture, 47.72.	Cereal, 0.77.
Insp. No. 60691.	Sausage.	Mike Puskrech, Kansas City, Kan., retailer.	Moisture, 25.11.	Cereal, none.	
Insp. No. 60692.	Sausage.	Cochrane Pkg. Co., Kansas City, Kan., producers.	M. Barrett, Kansas City, Kan., retailer.	Moisture, 52.56.	Cereal, none.
Insp. No. 60693.	Sausage.	P. B. Ditts, Kansas City, Kan., retailer.	Moisture, 39.26.	Cereal, none.	
Insp. No. 60694.	Sausage.	Beeman, Kansas City, Kan., retailer.	Moisture, 42.89.	Cereal, none.	
Insp. No. 60695.	Sausage.	Newer Bros., Kansas City, Mo., producers.	P. Suliff Bros., Kansas City, Kan., retailer.	Moisture, 49.11.	Cereal, none.
Insp. No. 60696.	Sausage.	J. W. West, Kansas City, Kan., retailer.	Moisture, 46.30.	Cereal, none.	
Insp. No. 60697.	Sausage.	H. Blathewick, Salina, Kan., retailer.	Moisture, 36.11.	Cereal, none.	
Insp. No. 60698.	Sausage.	J. Quinn, Salina, Kan., retailer.	Moisture, 50.05.	Cereal, 1.48.	Cereal added.
Insp. No. 60699.	Sausage.	Linderman Bros., Salina, Kan., retailer.	Moisture, 34.49.	Cereal, none.	
Insp. No. 60700.	Sausage.	Butzer Pkg. Co., Salina, Kan., producers.	Johnson Mer. Co., Salina, Kan., retailer.	Moisture, 47.68.	Cereal, 6.83.
Insp. No. 60701.	Sausage.	M. J. Green, Salina, Kan., retailer.	Moisture, 45.92.	Cereal, 0.48.	
Insp. No. 60702.	Sausage.	McKenney, Salina, Kan., retailer.	Moisture, 44.51.	Cereal, none.	
Insp. No. 22683.	Sausage.	Sent in by J. J. Entz, Hillsboro, Kan.	Moisture, 39.78.	Cereal, 1.92.	
Insp. No. 22686.	Bread crumbs	sent in by Dr. T. H. Jameson, Wellington, Kan.	Contained blueing (Prussian blue).		

FEBRUARY, 1919.

Insp. No. 81164.	Milk.	J. Switzer, Caldwell Kan., producer.	F. B. Watson, Caldwell, Kan., retailer.	Fat, 2.7.	Solids not fat, 6.05.	Illegal.
Insp. No. 81165.	Milk.	A. Metzger, Caldwell, Kan., producer.	A. Metzger, Caldwell, Kan., retailer.	Fat, 3.5.	Solids not fat, 9.32.	Passed.

APRIL, 1919.

Insp. No. 92916. Milk. H. J. Reynolds, Hutchinson, Kan., retailer. Fat. 3.9. solids not fat, 9.23. Passed.

Insp. No. 92917. Milk. H. J. Reynolds, Hutchinson, Kan., retailer. Fat, 3.9. Solids not fat, 9.29. Passed.

Insp. No. 92918. Cream. H. J. Reynolds, Hutchinson, Kan., retailer. Fat, 25.6. Passed.

Insp. No. 92919. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 3.3. Solids not fat, 9.33. Passed.

Insp. No. 92920. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 9.49. Substandard.

Insp. No. 92921. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 9.15. Substandard.

Insp. No. 92922. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 9.32. Substandard.

Insp. No. 92923. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.94. Substandard.

Insp. No. 92924. Milk. Ben Myers, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.80. Substandard.

Insp. No. 92925. Milk. D. McKeaver, Hutchinson, Kan., retailer. Fat, 4.5. Solids not fat, 9.54. Passed.

Insp. No. 92926. Milk. D. McKeaver, Hutchinson, Kan., retailer. Fat, 4.5. Solids not fat, 9.24. Passed.

Insp. No. 92927. Milk. J. S. Shrock, Hutchinson, Kan., retailer. Fat, 4.2. Solids not fat, 9.72. Passed.

Insp. No. 92928. Milk. J. S. Shrock, Hutchinson, Kan., retailer. Fat, 3.9. Solids not fat, 9.31. Passed.

Insp. No. 92929. Cream. J. S. Shrock, Hutchinson, Kan., retailer. Fat, 42.1. Passed.

Insp. No. 92930. Milk. Crescent Butter Store, Hutchinson, Kan., producer. Golden Rule Grocery, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 8.94. Substandard.

Insp. No. 92931. Milk. Crescent Butter Store, Hutchinson, Kan., producer. Golden Rule Grocery, Hutchinson, Kan., retailer. Fat, 3.1. Solids not fat, 9.04. Substandard.

Insp. No. 92932. Cream. Crescent Butter Store, Hutchinson, Kan., producer. Golden Rule Grocery, Hutchinson, Kan., retailer. Fat, 26.9. Passed.

Insp. No. 92933. Milk. S. K. Jensen, Hutchinson, Kan., producer. J. S. Dillon Store No. 1, Hutchinson, Kan., retailer. Fat, 2.5. Solids not fat, 9.31. Substandard.

Insp. No. 92934. Milk. S. K. Jensen, Hutchinson, Kan., producer. J. S. Dillon Store No. 1, Hutchinson, Kan., retailer. Fat, 2.1. Solids not fat, 9.73. Substandard.

Insp. No. 92935. Milk. S. K. Jensen, Hutchinson, Kan., producer. J. S. Dillon Store No. 1, Hutchinson, Kan., retailer. Fat, 2.0. Solids not fat, 9.60. Substandard.

Insp. No. 92936. Milk. S. K. Jensen, Hutchinson, Kan., producer. S. K. Jensen. Hutchinson, Kan., retailer. Fat, 3.4. Solids not fat, 9.27. Passed.

Insp. No. 92937. Milk. S. K. Jensen, Hutchinson, Kan., producer. S. K. Jensen. Hutchinson, Kan., retailer. Fat, 3.7. Solids not fat, 9.17. Passed.

Insp. No. 92938. Milk. S. K. Jensen, Hutchinson, Kan., producer. S. K. Jensen. Hutchinson, Kan., retailer. Fat, 3.5. Solids not fat, 9.02. Passed.

Insp. No. 92940. Milk. Golden West Butter Store, Hutchinson, Kan., producer. Everett Store, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 8.92. Substandard.

Insp. No. 92941. Milk. Golden West Butter Store, Hutchinson, Kan., producer. W. E. Williams, Hutchinson, Kan., retailer. Fat, 3.4. Solids not fat, 8.76. Passed.

Insp. No. 92942. Milk. Golden West Butter Store, Hutchinson, Kan., producer. W. E. Williams, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.16. Substandard.

Insp. No. 92943. Cream. Golden West Butter Store, Hutchinson, Kan., producer. W. E. Williams, Hutchinson, Kan., retailer. Fat, 39.6. Passed.

Insp. No. 92944. Milk. Cloverdale Dairy, Hutchinson, Kan., producer. Kessler & Stinsmand, Hutchinson, Kan., retailer. Fat, 3.0. Solids not fat, 9.59. Substandard.

Insp. No. 92945. Butter. Kessler & Stinson, Hutchinson, Kan., producer. Kessler & Stinsmand, Hutchinson, Kan., retailer. Moisture, 15.64. Short weight. Illegal.

Insp. No. 50139. Ice cream. P. M. Leonard, Leona, Kan., producer. P. M. Leonard. Leona, Kan., retailer. Fat, 4.4. Illegal.

Insp. No. 50140. Ice cream. A. E. Wyatt, Hiawatha, Kan., producer. A. E. Wyatt. Hiawatha, Kan., retailer. Fat, 3.6. Illegal.

Insp. No. 50141. Ice cream. Brown Co., Creamery, Hiawatha, Kan., producer. Fat, 12.4. Illegal.

Insp. No. 50142. Ice cream. Sabetha Creamery, Sabetha, Kan., producer. Fat, 11.1. Illegal.

Insp. No. 50143. Ice cream. Kreitzer Bros., Sabetha, Kan., producer. Kreitzer Bros.. Sabetha, Kan., retailer. Fat, 12.9. Illegal.

Insp. No. 50144. Ice cream. Beatrice Creamery, Beatrice, Neb., producer. M. W. Battey, Sabetha, Kan., retailer. Fat, 14.2. Passed.

Insp. No. 50145. Ice cream. P. Schmidt, Seneca, Kan., producer. P. Schmidt. Seneca, Kan., retailer. Fat, 9.0. Illegal.

Insp. No. 50146. Ice cream. Nemaha Butter & Ice Co., producers. Fat, 14.4. Passed.

Insp. No. 50147. Ice cream. Mrs. B. Schrader, Horton, Kan., producer. Mrs. B. Schrader, Horton, Kan., retailer. Fat, 13.4.

MAY, 1919.

- Insp. No. 60711. Ice cream. Atwood Ice Cream Co., Kansas City, Kan., producer. Fat, 7.6. Illegal.
- Insp. No. 60712. Ice cream. Atwood Ice Cream Co., Kansas City, Kan., producer. Fat, 7.2. Illegal.
- Insp. No. 60713. Canned milk. Carnation Milk Produce Co., Seattle, Wash., producer. Fat, 6.8. Solids not fat, 18.74. Illegal.
- Insp. No. 60714. Canned milk. Watson Durand, Salina, Kan., producer. A. Gehr, Salina, Kan., retailer. Fat, 5.2. Solids not fat, 20.36.
- Insp. No. 60715. Canned milk. Watson Durand, Salina, Kan., producer. A. Gehr, Salina, Kan., retailer. Fat, 7.2. Solids not fat, 18.30.
- Insp. No. 60716. Canned milk. A. Gehr, Salina, Kan., retailer. Fat, 7.2. Solids not fat, 18.45.
- Insp. No. 60717. Carolene. Carolene Co., Chicago, producers. A. Gehr, Salina, Kan., retailer. Fat, 6.4. Solids not fat, 19.77.
- Insp. No. 60718. Canned skim milk. Watson Durand, Salina, Kan., producer. A. Gehr, Salina, Kan., retailer. Fat, 0.8. Solids not fat, 17.70.
- Insp. No. 60719. Canned milk. Armour & Co., Kansas City, Kan., producers. E. J. Kaffir, Salina, Kan., retailer. Fat, 6.4. Solids not fat, 19.00.
- Insp. No. 81177. Ice cream. A. A. Schnell & Son, Iola, Kan., producers. Purity Ice Cream Co., Iola, Kan., retailer. Fat, 13.1. Illegal.
- Insp. No. 81178. Ice cream. A. A. Schnell & Son, Iola, Kan., producers. Purity Ice Cream Co., Iola, Kan., retailer. Fat, 9.2. Illegal.
- Insp. No. 81179. Ice cream. A. A. Schnell & Son, Iola, Kan., producers. Purity Ice Cream Co., Iola, Kan., retailer. Fat, 8.1. Illegal.
- Insp. No. 81180. Ice cream. S. Bushong, Chanute, Kan., producer. S. Bushong, Chanute, Kan., retailer. No sample received.
- Insp. No. 81184. Ice cream. Purity Ice Cream Co., Iola, Kan., producers. Purity Ice Cream Co., Iola, Kan., retailer. Fat, 11.6. Illegal.
- Insp. No. 81185. Ice cream. Baker & Co., Chanute, Kan., producers. Baker & Co., Chanute, Kan., retailer. Fat, 13.1. Illegal.
- Insp. No. 81186. Ice cream. Baker & Co., Chanute, Kan., producers. Baker & Co., Chanute, Kan., retailer. Fat, 13.0. Illegal.
- Insp. No. 81187. Ice cream. A. P. Bitts, Chanute, Kan., producer. A. P. Bitts, Chanute, Kan., retailer. Fat, 17.2. Passed.
- Insp. No. 81188. Ice cream. A. P. Bitts, Chanute, Kan., producer. A. P. Bitts, Chanute, Kan., retailer. Fat, 16.7. Passed.
- Insp. No. 81189. Ice cream. S. Bushong, Chanute, Kan., producer. S. Bushong, Chanute, Kan., retailer. Fat, 14.3. Passed.
- Insp. No. 81191. Ice cream. C. F. Alexander, Chanute, Kan., producer. C. F. Alexander, Chanute, Kan., retailer. Fat, 12.5. Illegal.
- Insp. No. 50149. S. condensed milk. Guthrie Mercantile Co., St. Joseph, Mo., producers. R. D. Crawford, Emporia, Kan., retailer. Fat, 2.30. Solids not fat, 66.49. No preservative.
- Insp. No. 50150. Ice cream. O. A. Kelm, Seneca, Kan., producer. O. A. Kelm, Seneca, Kan., retailer. Fat, 11.6. Illegal.
- Insp. No. 50151. Ice cream. J. P. Meinberg, Seneca, Kan., producer. J. P. Meinberg, Seneca, Kan., retailer. Fat, 13.6.
- Insp. No. 50153. Ice cream. T. A. Brown, Summerfield, Kan., producer. T. A. Brown, Summerfield, Kan., retailer. Fat, 13.3.
- Insp. No. 50155. Ice cream. T. W. Temple & Son, Marysville, Kan., producers. T. W. Temple & Son, Marysville, Kan., retailer. Fat, 15.4. Passed.
- Insp. No. 50156. Ice cream. M. A. Massur, Hanover, Kan., producer. M. A. Massur, Hanover, Kan., retailer. Fat, 13.8.
- Insp. No. 50157. Ice cream. Belleville Creamery Co., Belleville, Kan., producers. Fat, 12.4. Illegal.
- Insp. No. 50158. Ice cream. O. E. Brown, Washington, Kan., retailer. Fat, 10.2. Illegal.
- Insp. No. 50160. Ice cream. Farmers C. & I. Co., Osage City, Kan., producers. Farmers C. & I. Co., Osage City, Kan., retailer. Fat, 15.2. Passed.
- Insp. No. 92948. Milk. G. W. Randolph, Emporia, Kan., producer. G. W. Randolph, Emporia, Kan., retailer. Fat, 3.3. Solids not fat, 9.07. Passed.
- Insp. No. 92949. Milk. G. W. Randolph, Emporia, Kan., producer. G. W. Randolph, Emporia, Kan., retailer. Fat, 3.2. Solids not fat, 9.16. Passed.
- Insp. No. 92950. Cream. G. W. Randolph, Emporia, Kan., producer. G. W. Randolph, Emporia, Kan., retailer. Fat, 15.0.
- Insp. No. 92951. Milk. W. W. Keefer, Emporia, Kan., producer. W. W. Keefer, Emporia, Kan., retailer. Fat, 2.9. Solids not fat, 8.77. Substandard.
- Insp. No. 92952. Milk. W. W. Keefer, Emporia, Kan., producer. W. W. Keefer, Emporia, Kan., retailer. Fat, 3.7. Solids not fat, 9.75. Passed.
- Insp. No. 92953. Milk. W. W. Keefer, Emporia, Kan., producer. W. W. Keefer, Emporia, Kan., retailer. Fat, 2.9. Solids not fat, 9.88. Substandard.
- Insp. No. 92954. Milk. W. W. Keefer, Emporia, Kan., producer. W. W. Keefer, Emporia, Kan., retailer. Fat, 3.0. Solids not fat, 9.47. Substandard.
- Insp. No. 92955. Milk. W. W. Keefer, Emporia, Kan., producer. W. W. Keefer, Emporia, Kan., retailer. Fat, 2.8. Solids not fat, 9.71. Substandard.
- Insp. No. 92956. Milk. C. L. Williams, Emporia, Kan., producer. C. L. Williams, Emporia, Kan., retailer. Fat, 4.0. Solids not fat, 9.66. Passed.
- Insp. No. 92957. Milk. C. L. Williams, Emporia, Kan., producer. C. L. Williams, Emporia, Kan., retailer. Fat, 3.2. Solids not fat, 9.97.

Insp. No. 92959.	Cream.	W. J. Smith, producer.	W. J. Smith, retailer.	Fat, 15.6.
Insp. No. 92960.	Milk.	W. J. Smith, producer.	W. J. Smith, retailer.	Fat, 3.7.
Solids, 9.72 Passed.				
Insp. No. 92961.	Milk.	W. J. Smith, producer.	W. J. Smith, retailer.	Fat, 3.4.
Solids, 9.94.				
Insp. No. 92962.	Milk.	J. S. English, retailer.	Fat, 3.0.	Solids, 7.95. Illegal.
Insp. No. 92963.	Milk.	J. S. English, retailer.	Fat, 3.6.	Solids, 10.51. Passed.
Insp. No. 92964.	Milk.	C. H. Smith Produce, Hutchinson. Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.8. Solids, 9.57. Passed.
Insp. No. 92965.	Milk.	C. H. Smith Produce, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 4.0. Solids, 9.31. Passed.
Insp. No. 92966.	Milk.	Geo. Fernie, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.8. Solids, 9.34. Passed.
Insp. No. 92967.	Milk.	Geo. Fernie, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.3. Solids, 9.42. Passed.
Insp. No. 92968.	Milk.	J. W. Williams, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.70. Passed.
Insp. No. 92969.	Milk.	J. W. Williams, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.5. Solids, 9.86. Passed.
Insp. No. 92970.	Milk.	L. P. Danford, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.89. Substandard.
Insp. No. 92971.	Milk.	L. P. Danford, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.0. Solids, 9.78. Substandard.
Insp. No. 92972.	Milk.	B. A. Eastman, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.7. Solids, 10.33. Passed.
Insp. No. 92973.	Milk.	B. A. Eastman, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 4.3. Solids, 10.27. Passed.
Insp. No. 92974.	Milk.	J. Kellerman, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.3. Solids, 9.93. Passed.
Insp. No. 92975.	Milk.	J. Kellerman, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.4. Solids, 9.53. Passed.
Insp. No. 92976.	Milk.	A. J. Rupp, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.2. Solids, 9.20. Passed.
Insp. No. 92977.	Milk.	A. J. Rupp, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.3. Solids, 8.94. Passed.
Insp. No. 92978.	Milk.	A. J. Rupp, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.49. Substandard.
Insp. No. 92979.	Milk.	A. J. Rupp, Hutchinson, Kan., producer.	Ben Myers, Hutchinson, Kan., retailer.	Fat, 3.4. Solids, 8.81. Passed.
Insp. No. 92980.	Milk.	L. M. Beebe, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.2. Solids, 8.86. Passed.
Insp. No. 92981.	Milk.	L. M. Beebe, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 2.9. Solids, 9.38. Substandard.
Insp. No. 92982.	Milk.	L. M. Beebe, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.24. Substandard.
Insp. No. 92983.	Milk.	Roy Smith, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.3. Solids, 9.50. Passed.
Insp. No. 92984.	Milk.	Roy Smith, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.8. Solids, 9.44. Passed.
Insp. No. 92985.	Milk.	Roy Smith, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 4.1. Solids, 9.58. Passed.
Insp. No. 92986.	Milk.	Jake Miller, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.0. Solids, 10.42. Passed.
Insp. No. 92987.	Milk.	Jake Miller, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 2.6. Solids, 9.52. Substandard.
Insp. No. 92988.	Milk.	Jake Miller, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 4.3. Solids, 8.83. Passed.
Insp. No. 92989.	Milk.	Jake Miller, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.30. Passed.
Insp. No. 92990.	Milk.	O. L. Redd, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 2.9. Solids, 9.27. Substandard.
Insp. No. 92991.	Milk.	O. L. Redd, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.2. Solids, 9.45. Substandard.
Insp. No. 92992.	Milk.	O. L. Redd, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.4. Solids, 9.60. Passed.
Insp. No. 92993.	Milk.	O. L. Redd, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.1. Solids, 9.57. Passed.
Insp. No. 92994.	Milk.	Frank Owston, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.3. Solids, 9.44. Passed.
Insp. No. 92995.	Milk.	Arthur Peterson, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.0. Solids, 8.18. Illegal.
Insp. No. 92996.	Milk.	Frank Owston, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.4. Solids, 9.24. Passed.
Insp. No. 92997.	Milk.	J. R. Downs, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.8. Solids not fat, 9.57. Passed.
Insp. No. 92998.	Milk.	J. M. Doner, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.4. Solids not fat, 9.84. Passed.
Insp. No. 92999.	Milk.	J. M. Doner, Hutchinson, Kan., producer.	S. K. Jensen, Hutchinson, Kan., retailer.	Fat, 3.2. Solids not fat, 10.04. Passed.

- Insp. No. 93000. Milk. J. M. Doner, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.5. Solids not fat, 9.97. Passed.
- Insp. No. 93001. Milk. Frank Klem, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.8. Solids not fat, 9.77. Passed.
- Insp. No. 93002. Milk. Frank Klem, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.7. Solids not fat, 9.84. Passed.
- Insp. No. 93003. Milk. Frank Klem, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.8. Solids not fat, 9.98. Passed.
- Insp. No. 93004. Milk. George Bowser, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 2.6. Solids not fat, 9.80. Substandard.
- Insp. No. 93005. Milk. Robert Mills, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., producer. Fat, 2.5. Solids not fat, 9.54. Substandard.
- Insp. No. 93006. Milk. Robert Mills, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.8. Solids not fat, 9.21. Passed.
- Insp. No. 93007. Milk. T. S. Downs, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.7. Passed.
- Insp. No. 93008. Milk. Charles McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93009. Milk. Charles McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.0. Not enough sample, for solids.
- Insp. No. 93010. Milk. Charles McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93011. Milk. Charles McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93012. Milk. Fred McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 2.5. Solids not fat, 9.16. Substandard.
- Insp. No. 93013. Milk. Fred McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93014. Milk. Fred McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 8.85. Substandard.
- Insp. No. 93015. Milk. Fred McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93016. Milk. Fred McMurray, Hutchinson, Kan., producer. S. K. Jensen, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 9.56. Passed.
- Insp. No. 93017. Milk. Wm. Sallee, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 4.2. Passed.
- Insp. No. 93018. Milk. Wm. Sallee, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93019. Milk. Warman & Rowland, Hutchinson, Kan., producers. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 4.0. Passed.
- Insp. No. 93020. Milk. Chas. Sthole, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.7. Passed.
- Insp. No. 93021. Milk. Chas. Sthole, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93022. Milk. W. D. Coleman, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93023. Milk. A. M. Beor, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93024. Milk. A. M. Beor, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.0. Solids not fat, 9.86. Substandard.
- Insp. No. 93025. Milk. A. M. Beor, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93026. Milk. A. M. Beor, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93027. Milk. A. M. Beor, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93028. Milk. Pat Shea, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 7.24. Illegal.
- Insp. No. 93029. Milk. Pat Shea, Medora, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93030. Milk. T. J. Brown, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.24. Substandard.
- Insp. No. 93031. Milk. T. J. Brown, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 2.9. Solids not fat, 10.24. Substandard.
- Insp. No. 93032. Milk. J. Strawn, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93033. Milk. J. Strawn, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 3.1. Solids not fat, 9.99. Substandard.
- Insp. No. 93034. Milk. C. E. Nelson, Hutchinson, Kan., producer. Crescent Butter Store, Hutchinson, Kan., retailer. Fat, 4.1. Passed.
- Insp. No. 93035. Milk. O. E. Nelson, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 3.2. Solids not fat, 8.47. Substandard.
- Insp. No. 93036. Milk. E. A. Miller, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 4.5. Passed.
- Insp. No. 93037. Milk. E. A. Miller, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 3.8. Passed.
- Insp. No. 93038. Milk. M. Parrott, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 3.8. Passed.
- Insp. No. 93039. Milk. M. Parrott, Hutchinson, Kan., producer. Crescent Butter Store, retailer. Fat, 3.6. Passed.

- Insp. No. 93040. Milk. Wm. Hammond, Hutchinson, Kan., producer. Golden West Butter Co., retailer. Fat, 4.0. Passed.
- Insp. No. 93041. Milk. Wm. Hammond, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.5. Passed.
- Insp. No. 93042. Milk. J. D. Myers, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.5. Passed.
- Insp. No. 93043. Milk. J. D. Myers, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.0. Solids not fat, 9.56. Substandard.
- Insp. No. 93044. Milk. H. Gibson, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.5. Passed.
- Insp. No. 93045. Milk. H. Gibson, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.5. Passed.
- Insp. No. 93046. Milk. H. Gibson, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.0. Solids not fat, 9.09. Substandard.
- Insp. No. 93047. Milk. H. Gibson, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 2.9. Solids not fat, 9.09. Substandard.
- Insp. No. 93048. Milk. H. Gibson, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.2. Solids not fat, 9.44. Substandard.
- Insp. No. 93049. Milk. Gene Miller, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.5. Passed.
- Insp. No. 93050. Milk. Gene Miller, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 4.6. Passed.
- Insp. No. 93051. Milk. M. R. Shelton, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.8. Passed.
- Insp. No. 93052. Milk. M. R. Shelton, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 4.3. Passed.
- Insp. No. 93053. Milk. M. R. Shelton, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.4. Passed.
- Insp. No. 93054. Milk. E. A. Redd, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.4. Passed.
- Insp. No. 93055. Milk. E. A. Redd, Hutchinson, Kan., producer. Hutchinson Cry. Co., producer. Fat, 3.5. Passed.
- Insp. No. 93055½. Milk. E. A. Redd, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.8. Passed.
- Insp. No. 93056. Milk. Ed. Snyder, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 4.6.
- Insp. No. 93057. Milk. Ed. Snyder, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.6. Passed.
- Insp. No. 93058. Milk. R. D. Taylor, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.6. Passed.
- Insp. No. 93059. Milk. C. O. Kegarice, Hutchinson, Kan., producer. Hutchinson Cry., retailer. Fat, 3.6. Passed.
- Insp. No. 93060. Milk. C. O. Kegarice, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 3.9. Passed.
- Insp. No. 93061. Milk. A. B. Williams, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93062. Milk. A. B. Williams, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.0. Passed.
- Insp. No. 93063. Milk. J. W. Lewis, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.3. Passed.
- Insp. No. 93064. Milk. J. W. Lewis, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93065. Milk. M. L. Stewart, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 2.7. Solids not fat, 9.92. Substandard.
- Insp. No. 93066. Milk. M. L. Stewart, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93067. Milk. J. E. Kegarice, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93068. Milk. J. E. Kegarice, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.1. Passed.
- Insp. No. 93069. Milk. J. E. Kegarice, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat 4.1.
- Insp. No. 93070. Milk. O. F. Hornbaker, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.96. Substandard.
- Insp. No. 93071. Milk. O. F. Hornbaker, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8.
- Insp. No. 93072. Milk. A. F. Frinfrom, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93073. Milk. F. F. Frinfrom, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.9. Passed.
- Insp. No. 93074. Milk. O. A. Olson, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.1. Solids not fat, 9.60. Substandard.
- Insp. No. 93075. Milk. M. H. Stewart, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93076. Milk. M. H. Stewart, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93077. Milk. V. W. Hornbeck, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93078. Milk. V. W. Hornbeck, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.

- Insp. No. 93079. Milk. W. C. Pierce, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93080. Milk. W. C. Pierce, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.1. Solids not fat, 8.79. Substandard.
- Insp. No. 93081. Milk. W. C. Pierce, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93082. Milk. W. W. Rexroad, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93083. Milk. W. W. Rexroad, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.0. Passed.
- Insp. No. 93084. Milk. W. W. Rexroad, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93085. Milk. W. W. Rexroad, Hutchinson, Kan., producer. Hutchinson Cry. Co., retailer. Fat, 4.0. Passed.
- Insp. No. 93086. Milk. W. W. Rexroad, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93087. Milk. S. B. Couch, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93088. Milk. C. A. Rundell, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.2. Passed.
- Insp. No. 93089. Milk. J. D. Lewis, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 4.1. Passed.
- Insp. No. 93090. Milk. J. D. Lewis, Hutchinson, Kan., producer. Hutchinson Cry. Co., Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93091. Milk. Frank Lehr, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.2. Solids not fat, 8.66. Passed.
- Insp. No. 93092. Milk. Frank Lehr, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93093. Milk. Frank Lehr, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93094. Milk. Frank Lehr, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93095. Milk. Frank Lehr, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93096. Milk. R. Luellen, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.17. Substandard.
- Insp. No. 93097. Milk. R. Luellen, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 2.7. Solids not fat, 9.41. Substandard.
- Insp. No. 93098. Milk. Fred Mills, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 4.2. Substandard.
- Insp. No. 93099. Milk. W. E. Grass, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fats, 3.5. Passed.
- Insp. No. 93100. Milk. Fred Huston, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fats, 3.1. Solids not fat, 9.76. Substandard.
- Insp. No. 93101. Milk. Harry Brown, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 4.7. Passed.
- Insp. No. 93102. Milk. Frank Gookins, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93103. Milk. J. O. Shuler, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93104. Milk. P. H. Commer, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 3.0. Solids not fat, 9.02. Substandard.
- Insp. No. 93105. Milk. R. F. Thompson, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fat, 2.7. Solids not fat, 7.80. Illegal.
- Insp. No. 93106. Milk. R. F. Thompson, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fats, 4.7. Passed.
- Insp. No. 93107. Milk. R. F. Thompson, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fats, 3.2. Solids not fat, 8.63. Substandard.
- Insp. No. 93108. Milk. R. F. Thompson, Hutchinson, Kan., producer. Golden West Butter Store, Hutchinson, Kan., retailer. Fats, 3.7. Passed.
- Insp. No. 93109. Milk. Geo. Sours, Hutchinson, Kan., retailer. Fat, 4.1. Passed.
- Insp. No. 93110. Milk. Geo. Sours, Hutchinson, Kan., retailer. Fat, 2.9. Solids not fat, 9.54. Substandard.
- Insp. No. 93111. Milk. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.5. Passed.
- Insp. No. 93112. Milk. Blaine Hill, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 4.0. Passed.
- Insp. No. 93113. Milk. Blaine Hill, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93114. Milk. Blaine Hill, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.4. Passed.
- Insp. No. 93115. Milk. Blaine Hill, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.6. Passed.
- Insp. No. 93116. Milk. W. G. Seck, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.3. Passed.
- Insp. No. 93117. Milk. W. G. Seck, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93118. Milk. W. G. Seck, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.8. Passed.
- Insp. No. 93119. Milk. Geo. Thompson, Hutchinson, Kan., producer. Geo. Sours, Hutchinson, Kan., retailer. Fat, 3.4. Passed.

Insp. No. 93120. Milk. Hutchinson, Kan., retailer.	Geo. Thompson, Hutchinson, Kan., producer. Fat, 3.8. Passed.	Geo. Sours.
Insp. No. 93121. Milk. Hutchinson, Kan., retailer.	F. A. Brown, Hutchinson, Kan., producer. Fat, 4.3. Passed.	Geo. Sours.
Insp. No. 93122. Milk. Hutchinson, Kan., retailer.	A. D. Buskin, Hutchinson, Kan., producer. Fat, 4.1. Passed.	Geo. Sours.
Insp. No. 93123. Milk. Hutchinson, Kan., retailer.	A. D. Buskin, Hutchinson, Kan., producer. Fat, 3.4. Passed.	Geo. Sours.
Insp. No. 93124. Milk. Hutchinson, Kan., retailer.	G. H. Doughty, Hutchinson, Kan., producer. Fat, 3.9. Passed.	Geo. Sours.
Insp. No. 93125. Milk. Hutchinson, Kan., retailer.	G. H. Doughty, Hutchinson, Kan., producer. Fat, 3.8. Passed.	Geo. Sours.
Insp. No. 93126. Milk. Hutchinson, Kan., retailer.	John Mummey, Hutchinson, Kan., producer. Fat, 3.4. Passed.	Geo. Sours.
Insp. No. 93127. Milk. Hutchinson, Kan., retailer.	W. J. Morgan, Hutchinson, Kan., producer. Fat, 3.4. Passed.	Geo. Sours.
Insp. No. 93128. Milk. Hutchinson, Kan., retailer.	Geo. Kearney, Hutchinson, Kan., producer. Fat, 2.5. Solids not fat, 8.19. Illegal.	Geo. Sours.
Insp. No. 93129. Milk. Hutchinson, Kan., retailer.	Geo. Kearney, Hutchinson, Kan., producer. Fat, 3.8. Passed.	Geo. Sours.
Insp. No. 93130. Milk. inson, Kan., retailer.	H. Shuler, Hutchinson, Kan., producer. Fat, 3.9. Passed.	Geo. Sours, Hutch-
Insp. No. 93131. Milk. inson, Kan., retailer.	H. Shuler, Hutchinson, Kan., producer. Fat, 4.1. Passed.	Geo. Sours, Hutch-
Insp. No. 93132. Milk. Hutchinson, Kan., retailer.	H. L. Kollhoff, Hutchinson, Kan., producer. Fat, 2.8. Solids not fat, 9.49. Substandard.	Geo. Sours.
Insp. No. 93133. Milk. Hutchinson, Kan., retailer.	H. L. Kollhoff, Hutchinson, Kan., producer. Fat, 4.0. Passed.	Geo. Sours.
Insp. No. 93134. Milk. inson, Kan., retailer.	W. Kollhoff, Hutchinson, Kan., producer. Fat, 3.6. Passed.	Geo. Sours, Hutch-
Insp. No. 93135. Milk. inson, Kan., retailer.	W. Kollhoff, Hutchinson, Kan., producer. Fat, 3.0. Solids not fat, 9.22. Substandard.	Geo. Sours, Hutch-
Insp. No. 93136. Milk. Hutchinson, Kan., retailer.	John Kollhoff, Hutchinson, Kan., producer. Fat, 3.8. Passed.	Geo. Sours.
Insp. No. 93137. Milk. Hutchinson, Kan., retailer.	John Kollhoff, Hutchinson, Kan., producer. Fat, 3.6. Passed.	Geo. Sours.
Insp. No. 93138. Milk. Hutchinson, Kan., retailer.	Ray Walker, Hutchinson, Kan., producer. Fat, 4.9. Passed.	Geo. Sours.
Insp. No. 93139. Milk. Hutchinson, Kan., retailer.	Ray Walker, Hutchinson, Kan., producer. Fat, 3.3. Passed.	Geo. Sours.
Insp. No. 93140. Milk. Hutchinson, Kan., retailer.	John Schlegel, Hutchinson, Kan., producer. Fat, 3.2. Solids not fat, 9.38. Substandard.	Geo. Sours.
Insp. No. 93141. Milk. Hutchinson, Kan., retailer.	Mrs. L. A. Shuler, Hutchinson, Kan., producer. Fat, 3.2. Solids not fat, 8.49. Substandard.	Geo. Sours.
Insp. No. 93142. Milk. Sours, Hutchinson, Kan., retailer.	Jackson Ice Cream Co., Hutchinson, Kan., producers. Fat, 3.1. Solids not fat, 8.13. Illegal.	Geo.
Insp. No. 93143. Milk. Sours, Hutchinson, Kan., retailer.	Jackson Ice Cream Co., Hutchinson, Kan., producers. Fat, 3.8. Passed.	Geo.
Insp. No. 93144. Milk. Sours, Hutchinson, Kan., retailer.	Jackson Ice Cream Co., Hutchinson, Kan., producers. Fat, 3.4. Passed.	Geo.
Insp. No. 93146. Milk. Hutchinson, Kan., retailer.	L. M. Wright, Hutchinson, Kan., producer. Fat, 3.3. Passed.	Cloverdale Dairy.
Insp. No. 93147. Milk. Hutchinson, Kan., retailer.	L. M. Wright, Hutchinson, Kan., producer. Fat, 4.0. Passed.	Cloverdale Dairy.
Insp. No. 93148. Milk. Dairy, Hutchinson, Kan., retailer.	Mrs. Ed. Myers, Hutchinson, Kan., producer. Fat, 3.4. Passed.	Cloverdale
Insp. No. 93149. Milk. Hutchinson, Kan., retailer.	G. P. Coberly, Hutchinson, Kan., producer. Fat, 4.5. Passed.	Cloverdale Dairy.
Insp. No. 93150. Milk. Hutchinson, Kan., retailer.	G. P. Coberly, Hutchinson, Kan., producer. Fat, 3.8. Passed.	Cloverdale Dairy.
Insp. No. 93151. Milk. Hutchinson, Kan., retailer.	G. P. Coberly, Hutchinson, Kan., producer. Fat, 3.3. Passed.	Cloverdale Dairy.
Insp. No. 93152. Milk. Hutchinson, Kan., retailer.	G. P. Coberly, Hutchinson, Kan., producer. Fat, 3.0. Solids not fat, 10.16. Substandard.	Cloverdale Dairy.
Insp. No. 93153. Milk. Hutchinson, Kan., retailer.	Mrs. Schupp, Hutchinson, Kan., producer. Fat, 4.8. Passed.	Cloverdale Dairy.
Insp. No. 93154. Milk. Hutchinson, Kan., retailer.	Mrs. Schupp, Hutchinson, Kan., producer. Fat, 3.1. Solids not fat, 9.69. Substandard.	Cloverdale Dairy.
Insp. No. 93155. Milk. Dairy, Hutchinson, Kan., retailer.	A. H. Johnson, Hutchinson, Kan., producer. Fat, 4.2. Passed.	Cloverdale
Insp. No. 93156. Milk. Dairy, Hutchinson, Kan., retailer.	A. H. Johnson, Hutchinson, Kan., producer. Fat, 3.3. Passed.	Cloverdale
Insp. No. 93157. Milk. Hutchinson, Kan., retailer.	E. L. Holt, Hutchinson, Kan., producer. Fat, 3.9. Passed.	Cloverdale Dairy.
Insp. No. 93158. Milk. Hutchinson, Kan., retailer.	E. L. Holt, Hutchinson, Kan., producer. Fat, 4.3. Passed.	Cloverdale Dairy.
Insp. No. 93159. Milk. Dairy, Hutchinson, Kan., retailer.	C. H. Macklin, Hutchinson, Kan., producer. Fat, 4.1. Passed.	Cloverdale
Insp. No. 93160. Milk. Dairy, Hutchinson, Kan., retailer.	C. H. Macklin, Hutchinson, Kan., producer. Fat, 3.7. Passed.	Cloverdale
Insp. No. 93161. Milk. Hutchinson, Kan., retailer.	T. E. Holt, Hutchinson, Kan., producer. Fat, 3.3. Passed.	Cloverdale Dairy

Insp. No. 93162. Milk. W. H. Schofield, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 4.1. Passed.

Insp. No. 93163. Milk. W. H. Schofield, Hutchinson, Kan., producer. Cloverdale Dairy, retailer. Fat, 3.3. Passed.

Insp. No. 93164. Milk. Walter Duncan, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 8.0. Solids not fat, 9.56. Substandard.

Insp. No. 93165. Milk. Walter Duncan, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 3.0. Solids not fat, 9.48. Substandard.

Insp. No. 93166. Milk. Geo. Coon, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 4.4. Substandard.

Insp. No. 93167. Milk. Geo. Coon, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 2.8. Solids not fat, 9.31. Substandard.

Insp. No. 93168. Milk. H. L. Gleason, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 3.4. Substandard.

Insp. No. 93169. Milk. H. L. Gleason, Hutchinson, Kan., producer. Cloverdale Dairy, Hutchinson, Kan., retailer. Fat, 3.5. Substandard.

Insp. No. 93170. Milk. L. P. Parker, Eldorado, Kan., producer. G. H. Faulcomer & Sons, Eldorado, Kan., retailer. Fat, 2.8. Solids not fat, 9.99. Substandard.

Insp. No. 93171. Milk. G. H. Faulcomer, Eldorado, Kan., producer. G. H. Faulcomer & Sons, Eldorado, Kan., retailer. Fat, 3.7. Passed.

Insp. No. 93172. Milk. G. H. Faulcomer, Eldorado, Kan., producer. G. H. Faulcomer & Sons, Eldorado, Kan., retailer. Fat, 3.4. Passed.

Insp. No. 93173. Milk. G. H. Faulcomer, Eldorado, Kan., producer. The Sanitary Dairy, Eldorado, Kan., retailer. Fat, 3.3. Passed.

Insp. No. 93174. Milk. C. A. McClellan, Eldorado, Kan., producer. J. J. Murray, Eldorado, Kan., retailer. Fat, 3.3. Passed.

Insp. No. 93175. Cream. C. A. McClellan, Eldorado, Kan., producer. J. J. Murray, Eldorado, Kan., retailer. Fat, 24.0. Passed.

Insp. No. 93176. Milk. Dahler Schmidt, Eldorado, Kan., producer. Dahler Schmidt, Eldorado, Kan., retailer. Fat, 4.0. Passed.

Insp. No. 93177. Milk. Dahler Schmidt, Eldorado, Kan., producer. Dahler Schmidt, Eldorado, Kan., retailer. Fat, 4.1. Passed.

Insp. No. 93178. Milk. Walnut Valley Dairy, Eldorado, Kan., producer. Walnut Valley Dairy, Eldorado, Kan., retailer. Fat, 3.5. Passed.

Insp. No. 93179. Milk. Walnut Valley Dairy, Eldorado, Kan., producer. Walnut Valley Dairy, retailer. Fat, 3.3. Passed.

Insp. No. 93180. Milk. The Sanitary Dairy Co., Eldorado, Kan., producers. Brown & Son., Eldorado, Kan., retailer. Fat, 3.2. Solids not fat, 9.39. Substandard.

Insp. No. 93181. Milk. The Sanitary Co., Eldorado, Kan., producer. Brown & Son. Eldorado, Kan., retailer. Fat, 3.1. Solids not fat, 9.53. Substandard.

Insp. No. 93182. Milk. F. S. Gilliland, Eldorado, Kan., producer. F. S. Gilliland, Eldorado, Kan., retailer. Fat, 3.4. Passed.

Insp. No. 93183. Milk. F. S. Gilliland, Eldorado, Kan., producer. F. S. Gilliland, Eldorado, Kan., retailer. Fat, 4.1. Passed.

Insp. No. 93184. Milk. McNeal, Eldorado, Kan., retailer. Fat, 3.7. Passed.

Insp. No. 93185. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 2.8. Solids not fat, 9.35. Substandard.

Insp. No. 93186. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 4.2. Passed.

Insp. No. 93187. Milk. W. E. Dent, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 2.7. Solids not fat, 8.97. Substandard.

Insp. No. 93188. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 4.0. Passed.

Insp. No. 93189. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 4.4. Passed.

Insp. No. 93190. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 2.9. Solids not fat, 9.70. Substandard.

Insp. No. 93191. Milk. A. Z. Blankenship, Eldorado, Kan., producer. The Sanitary Dairy Co., Eldorado, Kan., retailer. Fat, 2.7. Solids not fat, 9.00. Substandard.

Insp. No. 93192. Ice cream. Grovier Prod. Co., Great Bend, Kan., producer. Grovier Prod. Co., Great Bend, Kan., retailer. Fat, 8.0. Illegal.

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Insp. No. 93199. Milk. Grovier Prod. Co., Great Bend, Kan., producer. G. W. Cook, Hutchinson, Kan., retailer. Fat, 4.9. Solids not fat, 8.98. Passed.

Insp. No. 93200. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 2.4. Solids not fat, 9.33. Substandard.

Insp. No. 93201. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 2.5. Solids not fat, 9.27. Substandard.

Insp. No. 93202. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 4.7. Solids not fat, 9.64. Passed.

Insp. No. 93203. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 3.7. Solids not fat, 9.94. Passed.

Insp. No. 93204. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 2.9. Solids not fat, 9.39. Substandard.

Insp. No. 93205. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 2.6. Solids not fat, 9.74. Substandard.

Insp. No. 93206. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 2.0. Solids not fat, 9.58. Substandard.

Insp. No. 93207. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 3.5. Solids not fat, 9.48. Passed.
 Insp. No. 93208. Milk. G. W. Cook, Hutchinson, Kan., retailer. Fat, 3.0. Solids not fat, 9.93. Substandard.
 Insp. No. 93209. Ice cream. Great Bend I. & F. & S. Co., Great Bend, Kan., producer. Great Bend I. F. & S. Co., Great Bend, Kan., retailer. Fat, 9.6. Illegal.
 Insp. No. 93210. Ice cream. Great Bend I. & F. & S. Co., Great Bend, Kan., producer. Great Bend I. F. & S. Co., Great Bend, Kan., retailer. Fat, 10.4. Illegal.
 Insp. No. 81197. Ice cream. Wood, Thomas & Crane, Coffeyville, Kan., producer. Wood, Thomas & Crane, Coffeyville, Kan., retailer. Fat, 9.8. Illegal.
 Insp. No. 81198. Ice cream. Wood, Thomas & Crane, Coffeyville, Kan., producer. Wood, Thomas & Crane, Coffeyville, Kan., retailer. Fat, 12.2. Illegal.
 Insp. No. 81199. Ice cream. J. A. Warren, Coffeyville, Kan., producer. J. A. Warren, Coffeyville, Kan., retailer. Fat, 9.7. Illegal.
 Insp. No. 81200. Ice cream. J. A. Warren, Coffeyville, Kan., producer. J. A. Warren, Coffeyville, Kan., retailer. Fat, 10.8. Illegal.
 Insp. No. 50171. Ice cream. P. I. Perkins, Frankfort, Kan., producer. P. I. Perkins, Frankfort, Kan., retailer. Fat, 11.4. Illegal.
 Insp. No. 50175. Ice cream. Beatrice Creamery Co., Concordia, Kan., producer. Fat, 18.7. Passed.
 Insp. No. 50176. Ice cream. Concordia Creamery Co., Concordia, Kan., producer. Fat, 13.8. Passed.
 Insp. No. 50177. Ice cream. Candy Palace, Concordia, Kan., retailer. Fat, 14.5. Passed.

Drug Analysis LVIII.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist;
 G. N. WATSON, Analyst.

The drug laboratory submits the following report to the Board of Health, which besides miscellaneous preparations, contains a report on spirits of camphor, essences of peppermint, aspirin tablets, linseed oil, and spices.

It will be noted that samples of essence of peppermint were found to be low in oil content and spirit of camphor to be low in camphor and to contain added water.

Samples of oil sold under the names of commercial linseed oil and paint oil, were found to be compounds, containing as one of their ingredients, mineral oil.

Five samples of "Pepsodent," a tooth paste declared by the manufacturer to contain pepsin, were examined. Pepsodent, like pepsin preparations in general, showed considerable variation in active pepsin content.

SPIRITS OF CAMPHOR.*

Lab. No. 7371. Insp. No. 50101. H. B. Leach & Son, Alton. Gms. camphor per 100 mls., 9.20. Substandard.
 Lab. No. 7373. Insp. No. 50105. G. C. Hamilton, Stockton. Gms. camphor per 100 mls., 8.21. Adulterated.
 Lab. No. 7376. Insp. No. 50108. C. M. Utt, Downs. Gms. camphor per 100 mls., 7.61. Adulterated.
 Lab. No. 7415. Insp. No. 81166. Mt. Mize Drug Co., Atchison. Gms. camphor per 100 mls., 9.04. Substandard.
 Lab. No. 7416. Insp. No. 81167. Mt. Mize Drug Co., Atchison. Gms. camphor per 100 mls., 11.1. Above standard.
 Lab. No. 7419. Insp. No. 50128. W. J. Briggs, Burlington. Gms. camphor per 100 mls., 6.9. Adulterated; 28 percent added water.
 Lab. No. 7432. Insp. No. 22702.

ESSENCE OF PEPPERMINT.†

Lab. No. 7418. Insp. No. 81171. Mt. Mize Drug Co., Atchison. 12 percent of oil. Above standard.
 Lab. No. 7420. Insp. No. 50129. W. J. Briggs, Burlington. 2.93 percent of oil. Adulterated.
 Lab. No. 7431. Insp. No. 22701. Office sample. .97 percent oil. Adulterated.

* Spirit of camphor should contain 9.5 gm. to 10.5 gm. of camphor per 100 mls. of the preparation.

† Essence of peppermint should contain 9.5-10.5 mls of oil of peppermint per 100 mls. of the preparation.

ACETYL SALICYLIC ACID TABLETS.

Lab. No. 7400. Insp. No. 81155. Alex. T. Gibler, Topeka. Grains found, 5. Passed.
 Lab. No. 7401. Insp. No. 81156. Alex. T. Gibler, Topeka. Grains declared, 5. Grains found, 4.7. Passed.
 Lab. No. 7402. Insp. No. 81157. Alex. T. Gibler, Topeka. Grains declared, 5. Grains found, 5. Passed.
 Lab. No. 7403. Insp. No. 81158. O. S. Pope, Topeka. Grains declared, 5. Grains found, 5. Passed.
 Lab. No. 7404. Insp. No. 81159. Arnold Drug Co., Topeka. Grains declared, 5. Grains found, 4.86. Passed.
 Lab. No. 7405. Insp. No. 81160. Arnold Drug Co., Topeka. Grains declared, 5. Grains found, 5. Passed.
 Lab. No. 7406. Insp. No. 81161. T. V. Campbell, Topeka. Grains declared, 5. Grains found, 5. Passed.
 Lab. No. 7407. Insp. No. 81162. Rosser Bros., Topeka. Grains found, 5. Passed.
 Lab. No. 7408. Insp. No. 81163. Rosser Bros., Topeka. Grains declared, 5. Grains found, 5. Passed.
 Lab. No. 7409. Insp. No. 50121. W. H. Ringer, Paola. Grains declared, 5. Grains found, 4.8. Passed.
 Lab. No. 7412. Insp. No. 50126. Ester Drug Co., Mound City. Grains found, 4.72. Passed.

LINSEED OIL.*

Lab. No. 7410. Insp. No. 50124. Z. A. Blackman, Pleasanton. Specific gravity, .930. Refractive index, 1.4838. Saponification, 192.89. Passed.
 Lab. 7411. Insp. No. 50125. Beatty Hdw. Co., Pleasanton. Specific gravity, .901. Refractive index, 1.4828. Saponification, 105.35. Adult.
 Lab. No. 7439. Insp. No. 50161. Robertson Pt. Co., Eskridge. Specific gravity, .927. Refractive index, 1.4827. Saponification, 195.75. Iodine, 175.75. Passed.
 Lab. No. 7440. Insp. No. 50162. Trustler Hdw. Co., Eskridge. Specific gravity, .928. Refractive index, 1.4826. Saponification, 196.0. Iodine, 173.2. Passed.
 Lab. No. 7441. Insp. No. 50163. F. W. Forwell, Burlingame. Specific gravity, .929. Refractive index, 1.4826. Saponification, 195.0. Iodine, 180.15. Passed.
 Lab. No. 7442. Insp. No. 50164. Wm Smith & Son, Burlingame. Specific gravity, .926. Saponification, 188.80. Iodine, 165.24. Passed.
 Lab. No. 7443. Insp. No. 50165. Burlingame Lmb. Co., Burlingame. Specific gravity, .930. Saponification, 191.80. Iodine, 168.10. Passed.
 Lab. No. 744. Insp. No. 50166. O. B. Cantrill, Harveyville. Specific gravity, .930. Refractive index, 1.4827. Saponification, 188.80. Iodine, 175.12. Passed.
 Lab. No. 7445. Insp. No. 50167. O. B. Cantrill, Harveyville. Specific gravity, .933. Refractive index, 1.4833. Saponification, 187.0. Iodine, 170.93. Passed.
 Lab. No. 7446. Insp. No. 22721. V. E. Raymond, Scandia. Specific gravity, .929. Saponification, 192.17. Iodine, 174.48. Passed.
 Lab. No. 7447. Insp. No. 22722. Miller & Gillispie, Topeka. Specific gravity, .929. Saponification, 188.24. Iodine, 182.73. Passed.
 Lab. 7452. Insp. No. 50173. H. E. Isaacson, Clyde. Specific gravity, .929. Saponification, 186.49. Iodine, 181.05. Passed.
 Lab. No. 7453. Insp. No. 50178. J. A. Freeburg, Scandia. Specific gravity, .930. Saponification, 190.54. Passed.
 Lab. No. 7454. Insp. No. 50179. Chicago Lumb. Co., Burr Oak. Specific gravity, .900. Saponification, 121.62. Iodine, 102.71. Adult.
 Lab. No. 7455. Insp. No. 50180. G. B. Crandall, Jewell City. Specific gravity, .866. Saponification, 90.54. Iodine, 54.16. Paint oil.

SPICES.

CINNAMON.

Lab. No. 7429. Insp. No. 22699. A. T. & Santa Fe. unclaimed freight, Topeka. Ash, 3.195 percent. Total eth. ext., 1.96 percent. Vol. eth. ext., 0.181 percent. Crude fiber, 19.65. Passed.

GINGER.

Lab. No. 7430. Insp. No. 22700. Unclaimed freight, Topeka. Ash, 4.7 percent. Ash, insoluble in H Cl, 0.37 percent. Ether ext., 4.3 percent. Vol. eth. ext., 0.7 percent. Water sol. ext., 12.65 percent. Passed.

NUTMEG (Grd.).

Lab. No. 7428. Insp. No. 22698. Unclaimed freight, Topeka. Total eth. ext., 31.56 percent. Ash, 2.11 percent. Passed.
 Lab. No. 7422. Insp. No. 22692. Flad & Marsh, Topeka. Mils. undigested albumen per U. S. P., method 14.

PEPSODENT.†

Lab. No. 7423. Insp. No. 22693. Arnold Drug Co., Topeka. Mils. undigested albumen per U. S. P., method 7.
 Lab. No. 7424. Insp. No. 22694. Arnold Drug Co., Topeka. Mils. undigested albumen per U. S. P., method 22.

* Linseed oil should conform to the Kansas standard as set forth in the Laws of 1911, House bill No. 184.

† Blank containing no active pepsin showed 28 mls. undigested albumen.

Lab. No. 7425. Insp. No. 50180. H. Kassell, Kansas City. Mils. undigested albumen per U. S. P., method 10.

Lab. No. 7425 ½. Insp. No. 81172. Mils. undigested albumen per U. S. P., method 19.

MISCELLANEOUS.

Lab. No. 7438. Insp. No. 22176. "Sassafras Bark." Mt. Mize Drug Co., Atchison. Contained bark of sassafras, a small amount of root, a few beans, and an appreciable amount of sand and red clay. Adulterated and misbranded.

Lab. No. 7417. Insp. No. 81168. "Carbolic Acid." Mt. Mize Drug Co., Atchison. Specific gravity, 1.0679; percent of Phenol, 94.53. Passed.

Lab. No. 7414. Insp. No. 22688. "Digestive Tonic." Brought to office by Mr. Rankin of attorney-general's office. Contained 18.61 percent alcohol and .001 gm. alkaloid per ounce. Could be used as an intoxicant.

Lab. No. 7413. Insp. No. 92900. "Honey Menthol Hoarhound Tablets." T. H. Cartmell, LaCygne. Passed.

Lab. No. 7399. Insp. No. 22680. "Lyko." Potts Drug Co., Wichita. Contained 9.56 percent solids, principally sugar. Contained Phenolphthalen. Flavor, suggestive of vanilla.

Lab. No. 7434. Insp. No. 22100. "Gasaver Tablets." G. H. Flinham, Topeka. Weight of tablets, 2.0650 gm. Contained naphthalene.

Lab. No. 7435. Insp. No. 22711. "Non Spi." Crontz Bros., Topeka. Total solids. 20.25 gm. per 100 mls. Aluminum chloride. 17.35 gm. per 100 mls. FeCl₃ present; sulphates present.

Lab. No. 7436. Insp. No. 22712. "Non Perspire." Office sample. Contained 13 percent of aluminum chloride. Perfumed with violet.

Lab. No. 7437. Insp. No. 5400. "Famo Hair Tonic." Contained salicylic acid, glycerin, and an acrid substance suggestive of saponin.

Report of Unofficial Samples for July, 1919.

BEVERAGES.

1122. "Old Log Cabin Cider." Sent in by county attorney from Russell, Kan. Alcohol, 5.11 percent.

1123. Hard cider. Sent in by county attorney from Russell, Kan. Broken in transit.

1124. Hard cider. Sent in by L. L. Shoemaker, El Dorado, Kan. Retailer, Jno. McConnell, El Dorado, Kan. Alcohol, 5.18 percent.

1125. Hard cider. Sent in by L. L. Shoemaker, El Dorado, Kan. Retailer, Holt, El Dorado, Kan. Alcohol 6.71 percent.

1126. Hard cider. Sent in by L. L. Shoemaker, El Dorado, Kan. Retailed at 304 N. Main street, El Dorado, Kan. Alcohol, 4.89 percent.

1127. Hard cider. Sent in by L. L. Shoemaker, El Dorado, Kan. Retailer, C. E. Noyse, E. 4th St., El Dorado, Kan. Alcohol, 3.58 percent.

MILK.

1105. Breast milk, sent in from Sabetha, Kan.

1117. Milk sent in from Dodge City, Kan. (Bad taste claimed.)

VINEGAR.

1114. Sent in from Sterling, Kan. Acidity, 0.67.

1119. Sent in from Ness City, Kan. Acidity, 2.46.

1120. Sent in from Ness City, Kan. Acidity, 2.32.

1121. Sent in from Ness City, Kan. Acidity, 2.54.

1121a. Sent in from Ness City, Kan. Acidity, 4.06.

**Unofficial Samples Tested at the State Food Laboratory,
Lawrence, Kan., During August, 1919.**

BEVERAGES.

1128. Cider. Sent in by county attorney, Russell, Kan. Alcohol, 5.48 percent.
 1129. Cider. Sent in by county attorney, Russell, Kan. Alcohol, 5.63 percent.
 1130. Beverage. Sent in by county health officer, El Dorado, Kan. Alcohol, 4.15 percent.
 1150. Beverage. Three samples, one broken, one half filled, one empty.
 1177. Beverage. Sent in by attorney-general. Taken from Fuller's Pool Hall. Alcohol, 5.78 percent.
 1178. Beverage. Sent in by attorney-general. Taken from Fuller's Pool Hall. Alcohol, 5.85 percent.
 1179. Cider. Lost in transit.
 1180. Beverage. Sent in by county attorney, Ashland, Kan., from Sitka, Kan. Alcohol, 0.40 percent. Passed.
 1181. Beverage. Sent in by county attorney, from Sitka, Kan. Leaked out in transit.
 1182. Beverage. Sent in by county attorney, from Sitka, Kan. Alcohol, 5.78 percent.
 1183. Beverage. Sent in by county attorney, from Sitka, Kan. "Trivola White Ribbon." Trivola Union Co., Denver, Colo. Alcohol, 0.16 percent. Passed.
 1184. Beverage. Sent in by county attorney, from Sitka, Kan. Alcohol, 5.63 percent.
 1185. "Excelso." Hamm Excelso Co., St. Paul, Minn. Sent in by county attorney, from Sitka, Kan. Alcohol, 0.16 percent.

Food Analysis LXIV.

E. H. S. BAILEY, Director Food Laboratory. W. S. LONG, Chemist in Charge.

SEPTEMBER 1, 1919.

BEVERAGES.

22738. "Virginia Dare" wine. Sample too small for complete analysis.
 22750. Cider. Sent in by attorney-general. Alcohol, 8.25 percent.
 22751. Cider. Sent in by attorney-general. Alcohol, 8.25 percent.

MISCELLANEOUS.

22745. Cream of Tartar. Sent in from Wakeeney, Kan. Said to have made people ill. Tartar emetic.
 225. Coffee. Retailer, Heinly & Kanoff, Topeka, Kan. Passed.
 22748. "Rose Carnival Stringless Beans." Valley Canning Co., Newburg, Oregon. Retailer, Fort Scott Wholesale Grocery Co., Fort Scott, Kan. About one-third *string* beans.
 93219. Ice cream. Roth and Bainbridge, Dodge City, Kan. Made by Dodge City Ice Cream & Produce Co., Dodge City, Kan. Fat, 9.0 percent. Illegal.
 93220. Ice cream. Roth and Bainbridge, Dodge City, Kan. Made by Dodge City Ice Cream & Produce Co., Dodge City, Kan. Fat, 9.0 percent. Illegal.

Milk Samples from Lawrence, Kan., Analyzed During August, 1919.

(Samples taken by City Milk Inspector.)

1151. Hawkins. Fat, 3.90 percent. Non-fat solids, 8.05 percent. Bacteria, 70,000. *B. coli* 100. Much dirt present.
1152. Owens. Fat, 4.20 percent. Bacteria, 80,000. *B. coli*, 100. Visible dirt present.
1153. Gehret. Fat, 2.90 percent. Non-fat solids, 8.16 percent. Bacteria, 2,250,000. *B. coli*, 100. Visible dirt present.
1154. Chamney. Fat, 2.70 percent. Non-fat solids, 8.28 percent. Bacteria, 170,000. *B. coli*, 100. Visible dirt present.
1155. H. H. Brown. Fat, 3.40 percent. Bacteria, 100,000. No *B. coli* present. Much dirt, hairs, etc.
1156. Gehret. Cream. Fat, 26.0 percent. Bacteria, 5,000,000. *B. coli* present, 100. Visible dirt present.
1157. White. Fat, 4.00 percent. Bacteria, 10,000. *B. coli*, 100. No visible dirt.
1158. Katherman. Fat, 4.70 percent. Bacteria, 140,000. *B. coli*, 100. Visible dirt present.
1159. Starnes. Fat, 3.80 percent. Bacteria, 100,000. *B. coli*, 100. Visible dirt present.
1160. Winchell. Fat, 3.70 percent. Non-fat solids, 7.75 percent. Bacteria, 150,000. *B. coli*, 100. Visible dirt present.
1161. Kelley. Fat, 4.20 percent. Non-fat solids, 8.35 percent. Bacteria, 120,000. No *B. coli* present. Visible dirt present.
1162. Fritzell. Fat, 3.40 percent. Non-fat solids, 8.40 percent. Bacteria, 130,000. *B. coli*, 100. Much visible dirt present.
1163. Harding. Fat, 4.15 percent. Non-fat solids, 8.19 percent. Bacteria, 5,000. No *B. coli* present. Visible dirt present.
1164. Chamney. Fat, 3.80 percent. Non-fat solids, 8.43 percent. Bacteria, 350,000. No *B. coli* present. No visible dirt.
1165. Miller. Fat, 4.00 percent. Bacteria, 500,000. No *B. coli* present. No visible dirt.
1166. Miller. Cream. Fat, 23.50 percent. Bacteria, 900,000. No *B. coli* present. Visible dirt present.
1167. Mason. Fat, 3.90 percent. Non-fat solids, 8.49 percent. Bacteria, 140,000. *B. coli*, 100. Visible dirt present.
1168. Gehret. Fat, 3.65 percent. Non-fat solids, 7.17 percent. Bacteria, 150,000. *B. coli*, 100. Visible dirt present.
1169. Long. Fat, 4.10 percent. Bacteria, 2,000. No *B. coli* present. No visible dirt.
1170. Kelley. Fat, 3.80 percent. Bacteria, 80,000. No *B. coli* present. No visible dirt.
1171. Maffett. Fat, 4.70 percent. Bacteria, 5,000. No *B. coli* present. Much visible dirt.
1172. Mason. Fat, 3.55 percent. Bacteria, 90,000. *B. coli* present, 100. Very dirty milk.
1173. Perry. Fat, 5.60 percent. (No further analysis.)
1174. Gehret. Fat, 3.60 percent. Non-fat solids, 6.99 percent. Bacteria, 250,000. *B. coli*, 100. Visible dirt present.
1175. Winchell. Fat, 3.40 percent. Non-fat solids, 8.31 percent. Bacteria, 50,000. *B. coli*, 100. No visible dirt.
1176. T. H. White. Fat, 5.20 percent. Bacteria, 100,000. *B. coli*, 100. No visible dirt.
1186. Roper. Fat, 2.85 percent. Bacteria, 15,000. No *B. coli* present. Visible dirt present.
1187. Kelly. Fat, 4.20 percent. Bacteria, 80,000. No *B. coli* present. Visible dirt present.
1188. Stephenson. Fat, 4.00 percent. Bacteria, 50,000. No *B. coli* present. Visible dirt present.

1189. Messenheimer. Fat, 4.40 percent. Bacteria, 10,000. *B. coli*, 100. No visible dirt.
1190. Perry. Fat, 6 percent. Bacteria, 650,000. No *B. coli* present. No visible dirt.
1191. Roper. Fat, 2.60 percent. Bacteria, 30,000. No *B. coli* present. No visible dirt.
1192. Starnes. Fat, 3.40 percent. Non-fat solids, 8.27 percent. Bacteria, 40,000. *B. coli* present. Visible dirt present.
1193. Hook. Fat, 4.90 percent. Non-fat solids, 8.08 percent. Bacteria, 30,000. No *B. coli* present. Visible dirt present.
1194. Fritzel. (Guernsey Dairy). Fat, 2.95 percent. Non-fat solids, 8.32 percent. Bacteria, 250,000. *B. coli*, 1,000. Visible dirt present.
1195. Smith. Fat, 2 percent. Non-fat solids, 7.35 percent. Bacteria, 200,000. *B. coli*, 1,000. Very dirty milk.
1196. Brown. Fat, 4 percent. Bacteria, 100,000. *B. coli*, 100. Visible dirt present.
1197. Hetzel. Fat, 4.10 percent. Bacteria, 200,000. *B. coli*, 100. Visible dirt present.
1198. Hawkins. Fat, 4.20 percent. Bacteria, 800,000. No *B. coli* present. Visible dirt present.
1199. Smith. Fat, 3.80 percent. Bacteria, 600,000. *B. coli*, 100. Much visible dirt. Solids not fat, 8.43 percent. Added water indicated. Much dirt present.

Report of Food Laboratory, Kansas State Agricultural College.

JULY, 1919.

22728. Milk from E. Danzer, Leavenworth, Kan. Fat, 3.5. Solids not fat, 8.73. Passed.
22729. Milk from E. Raymond, Leavenworth, Kan. Fat, 2.6. Solids not fat, 9.01. Substandard.
22730. Milk from J. Hutchinson, Leavenworth, Kan. Fat, 4.8. Solids not fat, 8.64. Passed.
22731. Milk from J. Hutchinson, Leavenworth, Kan. Fat, 2.5. Solids not fat, 8.67. Substandard.
2273. Evaporated milk from Helvetia Milk Condensing Co., Highland, Ill. Poehler Merc. Co., Topeka, Kan. Fat, 8.0. Total solids, 29.08.
22734. Evaporated milk from Borden's Condensed Milk Co., New York. Fat, 8.0. Total solids, 27.13.
22735. Evaporated milk from Carnation Milk Products Co., Chicago and Seattle. Fat, 8.0. Total solids, 27.86.
22736. Evaporated milk, "Sunburst Brand." Fat, 8.0. Total solids, 26.34.
22737. Evaporated milk from Libby, McNeil & Libby, Chicago. Fat, 8.0. Total solids, 27.93.

AUGUST, 1919.

81210. Ice cream from Purity Ice Cream Co., Iola, Kan. Fat, 20. Passed.
81211. Ice cream from Purity Ice Cream Co., Iola, Kan. Fat, 19.8. Passed.
81212. Ice cream, from Purity Ice Cream Co. Retailer, J. D. Mundis & Co., Iola, Kan. Fat, 7. Illegal.
22742. Ice cream, from Candy Land (C. Catraks and William Miks), 203 East Douglas, Wichita, Kan. Fat, 10.7. Illegal.
22741. Ice cream, from Khlentooz Brothers, Wichita, Kan. Fat, 8.8. Illegal.
22743. Ice cream, from John Sillas, Wichita, Kan. Fat, 7.2. Illegal.
22744. Ice cream, from Ed Ceros, Wichita, Kan. Fat, 9.2. Illegal.

The Red Cross Christmas Seal Sale, 1919-1920.

The National Tuberculosis Association is this year making an appeal for \$6,500,000 from the American public for the purpose of fighting tuberculosis and its annual death toll of 150,000. The amount of the Kansas budget is \$130,000. The Kansas association is putting on a campaign at the dates set by the national association—December 1 to 10, under the direction of Mr. Paul Gerhardt, who has been loaned to the Kansas Association, for the emergency, by the national association. He has divided the work up by counties and is organizing each county, apportioning a definite quota to each. Since the sum asked for from any one county is not great, there will be no difficulty in conducting the sale and raising the required amount of money.

The Red Cross seal drive, while it may be compared with the larger drives in the matter of importance, involves nothing like the amount of work, as it calls only for a small amount made up by small contributions.

A special feature of the work for 1920 is the issue of health bonds in denominations of \$5 and upwards. The Kansas Association proposes to give these health bonds a real value by according to every purchaser the privilege of addressing the state association at any time during the year, on any matter of personal health, or the health of the community. This makes the sale of the bonds an unusually attractive proposition.

Health for Everyone.

We often say that public health, within reasonable limits, is a purchasable commodity, but we know that the only way it can be purchased is by using our money for universal education. Health officers, social workers and teachers find much to discourage them in their efforts to spread the campaign of public health, and when it comes to personal health, which is to say, health for each one of the mass of individuals who make up the public, they are almost ready to give up.

"It is all very well," said a teacher, after hearing a splendid lecture on the health of rural school children, "it is all very well, but who is going to do such things in my county?" The answer is that *you* are going to do them. You are going to do them, not alone, but by organization with a few other enthusiasts among whom will be your county health officer, county nurse, and perhaps one or two of the doctors of the community, in addition to the converts whom you will constantly be making by your good example.

Organizations, such as these, must not be confined to our large cities, our prosperous towns, our well organized and well populated communities, but must spread out into the remotest parts of our rural districts. The successful carrying on of such a work calls for a state organization and a definite program of work, together with a reasonable amount of counsel and supervision. At the present time such a work as this is carried on to some extent by the Kansas Tuberculosis Association, which really should be called the "Kansas Public Health Association," since its work to combat tuberculosis is so broad and general that it covers every feature of public health.

The Kansas Tuberculosis Association, in the year 1920, will organize local associations in every county where it meets any response, whatever, from local enthusiasts. Dr. Seth L. Cox is the medical director or field organizer, and may be addressed at 601 Mills Bldg., Topeka, Kan.

In the year 1919 the association has employed eight district nurses, under the supervision of Mrs. V. K. Kimble, R. N., who have done a great variety of work including school nursing, district nursing, making addresses to clubs and other organizations, and promoting the work of the Modern Health Crusade.

The Modern Health Crusade, itself, is a fine feature of the work that the association is conducting. At present there are about 60,000 Kansas school children in the Modern Health Crusade with the probability that the number will be increased to 100,000 very shortly.

The Modern Health Crusade is a system by which school children are encouraged to do certain health chores each day, including such things as bathing, brushing the teeth, attending to the bowel habit, keeping the person and clothing clean, and other items that go to make up personal and public hygiene. For these health chores they are awarded certain pins and medals and are given first the title of "Page," then of "Squire," and then of "Knight." As you will readily see, this is making a play of ancient chivalry in order to give attractiveness to various prosaic duties that the average child is inclined to shirk. It is working out with wonderful success, and will result in definitely fixing valuable habits in the life of the child while still at an impressionable age.

This is only one of the things that the association is doing, and represents but a small part of its aims. When it is fully organized it will present to county associations and workers in public health everywhere throughout the state a definite program of work which may be followed consistently throughout the year, and will be a great factor in producing sanitary schools, sanitary homes, and sanitary towns and cities. There is no doubt that county health officers have often longed for the aid of some definite organization that will throw the weight of public opinion in the right direction in certain vexed matters that continually arise in the process of making our homes and schools healthful. Such an organization as this is a powerful agent for help in these directions.

In the month of December the National Tuberculosis Association is putting on, throughout all the country, its annual Red Cross Christmas seal sale. It is upon the funds produced from this sale that the association depends entirely for its financial support. The Kansas association is now laying plans for its county organizations with the hope that this year there will be a sufficient sum realized to do effective work in 1920. This is possible by a comparatively small budget being assigned to each county. The work already done has been very effective as shown by reports of the association. The money is expended in a very conservative and practical way, as is assured by the personnel of the association. You can do no better work for public health at this time than to assist the county chairman of your county in pushing the Red Cross Christmas seal campaign.

KEEP WELL!

1. Ventilate every room you occupy.
2. Wear loose, porous clothing suited to season, weather, and occupation.
3. If you are an indoor worker, be sure to get recreation outdoors.
4. Sleep in fresh air always; in the open if you can.
5. Hold a handkerchief before your mouth and nose when you cough or sneeze and insist that others do so, too.
6. Always wash your hands before eating.
7. Do not overeat. This applies especially to meats and eggs.
8. Eat some hard and some bulky foods; some fruits.
9. Eat slowly—Chew thoroughly.
10. Drink sufficient water daily.
11. Evacuate thoroughly, regularly.
12. Stand, sit, and walk erect.
13. Do not allow poisons and infections to enter the body.
14. Keep the teeth, gums, and tongue clean.
15. Work, play, rest, and sleep in moderation.
16. Keep serene. Worry is the foe of health. Cultivate the companionship of your fellow men.
17. Avoid self-drugging. Beware the plausible humbug of the patent medicine faker.
18. Have your doctor examine you carefully once a year. Also consult your dentist at regular intervals.

—U. S. Public Health Service.

BULLETIN

OF THE

Kansas State Board of Health.

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S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

November, 1919

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Keep up the out-door exercise.

It can be done—for you can do it!

The insanitary privy is a *community crime*.

An apple at night will make you "sleep tight."

Is your neighbor obeying the quarantine regulations?

Let's try the "setting-up" exercise when we can't take the out-door variety.

"Remember now thy Creator in the days of thy youth"—ere the evil days draw nigh!

A place for everything and everything in its place is a fundamental in home sanitation.

Those who dance must "pay the fiddler." Whatsoever a man soweth that must he also reap.

If your local health officer is doing good work, commend him; if he is "asleep at the switch" wake him!

MORBIDITY REPORT FOR OCTOBER, 1919.

Other Diseases (see Addenda).	Influenza.....	Poliomyelitis (epidemic)....	Meningitis (epidemic)....	Pneumonia (acute lobar)..	Mumps.....	Chickpox.....	Whooping Cough.....	German Measles (rubella).....	Measles (morbilli).....	Scarlet Fever..	Diphtheria.....	Smallpox.....	Typhoid and Paratyphoid..	COUNTIES AND CITIES.
343	101	14	7	22	50	87	86	3	23	334	476	80	108	THE STATE.....
1	0	0	0	0	0	2	0	0	0	0	0	0	1	Allen, except.....
0	0	0	0	0	0	0	0	0	0	1	0	0	0	Iola.....
2	0	0	0	0	0	0	0	1	0	0	0	0	0	Anderson.....
1	0	0	0	1	0	1	0	0	0	0	2	0	0	Atchison, except.....
0	0	0	0	0	0	6	2	0	0	0	0	6	1	Atchison city.....
3	0	0	0	0	0	0	0	0	0	2	0	0	0	Barber.....
0	2	0	0	3	0	0	0	0	0	3	1	3	0	Barton, except.....
0	1	0	0	1	0	0	0	0	0	2	0	0	2	Great Bend.....
0	0	0	0	0	0	0	0	0	0	1	0	0	1	Bourbon, except.....
8	0	0	0	1	0	0	0	0	0	0	0	0	0	Fort Scott.....
0	8	0	0	0	0	0	0	0	0	4	0	0	0	Brown.....
0	0	0	0	0	2	1	0	0	0	13	9	0	5	Butler, except.....
1	0	0	0	0	1	5	0	0	1	4	8	1	2	Augusta.....
2	1	0	0	0	0	0	0	0	0	2	38	1	8	El Dorado.....
1	0	0	0	0	0	1	5	0	0	3	0	0	1	Chase.....
5	0	0	0	0	0	0	0	0	1	0	14	0	1	Chautauqua.....
0	0	0	0	0	0	0	0	0	0	7	2	1	8	Cherokee, except.....
0	0	0	0	0	0	0	0	0	0	3	1	7	4	Galena.....
0	1	0	0	0	0	0	0	0	0	0	0	7	0	Chevone.....
1	0	0	0	0	0	0	0	0	0	7	0	0	0	Clark.....
0	2	0	0	0	0	4	1	0	0	3	0	0	1	Clay.....
3	0	0	0	0	0	3	1	0	1	1	3	1	0	Cloud, except.....
0	0	0	0	0	0	0	0	0	0	0	1	0	0	Concordia.....
0	1	0	0	0	0	0	0	0	0	14	0	0	0	Coffey.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Comanche.....
0	0	0	0	0	0	1	0	0	0	5	1	0	0	Cowley, except.....
4	1	0	0	0	0	0	0	0	0	7	1	0	1	Arkansas City.....
1	1	0	0	0	8	1	0	0	0	1	1	0	0	Winfield.....
2	2	1	0	1	0	1	5	0	0	3	5	0	2	Crawford, except.....
0	0	0	0	1	0	0	0	0	0	2	4	0	0	Pittsburg.....
0	0	0	0	0	0	0	0	0	0	15	0	0	0	Decatur.....
0	0	1	0	0	0	0	0	0	1	7	5	0	0	Dickinson.....
0	2	0	1	0	0	5	0	0	0	0	17	0	1	Doniphan.....
0	1	3	0	0	0	0	2	0	0	0	0	1	1	Douglas, except.....
17	1	1	0	0	2	1	7	0	0	3	12	0	1	Lawrence.....
0	0	0	0	0	0	1	0	0	0	2	0	0	0	Edwards.....
0	3	0	0	1	0	0	0	0	1	2	8	0	2	Elk.....
1	0	0	0	0	0	0	0	0	0	0	0	0	0	Ellis.....
0	1	0	0	0	0	0	0	0	0	0	0	0	0	Ellsworth.....
0	1	0	0	0	0	0	0	0	0	0	0	0	2	Finney.....
2	0	0	0	2	0	0	0	0	0	7	0	0	1	Ford, except.....
0	0	0	0	0	0	1	1	0	0	17	3	0	0	Dodge City.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Franklin, except.....
0	0	0	0	0	1	0	2	0	0	1	0	0	0	Ottawa.....
0	1	0	0	0	0	0	0	0	0	0	2	0	3	Geary, except.....
0	0	0	0	0	0	0	0	0	0	1	55	0	0	Junction City.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Gove.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Graham.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Grant.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Gray.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Greeley*.....
0	2	0	1	0	0	0	5	0	2	0	4	0	0	Greenwood.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Hanilton.....
0	0	0	0	0	0	1	0	0	0	1	2	0	0	Harper.....
0	0	0	0	0	0	0	0	0	0	2	2	0	0	Harvey, except.....
0	0	0	0	0	6	0	0	0	0	2	2	0	0	Neaton.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haskell.....
1	0	0	0	0	0	0	0	0	0	0	0	0	1	Hodgeman.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Jackson.....
0	4	1	0	1	0	1	0	0	0	13	0	4	0	Jefferson.....
1	0	0	0	0	0	0	0	0	2	2	0	0	1	Jewell.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Johnson.....
0	0	0	0	0	3	0	1	0	0	4	9	0	0	Kerny.....
0	0	0	0	0	0	0	0	0	0	7	0	3	0	Kingman.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Kiowa.....
3	0	1	0	0	0	0	0	0	0	9	0	0	3	Labette, except.....
0	1	0	0	1	0	0	0	0	0	5	7	1	0	Parsons.....
0	0	0	0	0	0	0	0	0	0	0	0	0	0	Lane*.....
1	0	2	0	0	0	0	1	0	0	0	2	0	1	Leavey north, except.....
0	8	12	0	0	0	0	0	0	0	0	12	8	0	Leavenworth city.....

MORBIDITY REPORT FOR OCTOBER, 1919—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Scarlet Fever	Measles (morbilli)	German measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Measles (epidemic)	Pollinosis (epidemic)	Influenza	Other Diseases (see Addenda)
Lincoln	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Linn	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Marion	1	0	4	2	1	0	4	0	0	0	0	0	0	0
Marshall	1	0	12	3	0	0	0	2	0	1	0	0	0	1
McPherson	1	0	0	0	0	0	0	2	0	0	0	0	0	0
Meade	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Miami	0	0	0	1	0	0	0	2	0	0	0	0	0	0
Mitchell	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville	4	0	7	3	0	0	0	0	1	1	0	0	0	1
Independence	1	0	18	3	0	0	0	0	0	1	0	0	0	0
Morris	0	0	0	14	0	0	0	0	0	0	0	0	0	0
Morton	2	0	0	0	0	0	0	0	0	0	1	0	0	0
Nemaha	0	0	8	1	0	0	11	8	1	0	0	0	0	0
Nembo, except Chanute	3	0	1	2	0	0	0	0	0	0	0	0	0	0
Nembo	3	3	0	5	2	0	0	0	0	0	0	0	0	0
Ness	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Norton	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Osage	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Osborne	0	0	1	0	0	0	0	0	3	0	0	0	0	0
Ottawa*	0	1	0	2	0	0	0	1	0	0	0	0	0	0
Pawnee	0	23	0	0	1	0	0	1	0	0	0	0	0	1
Phillips	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Pottawatomie	0	0	1	4	0	0	0	0	0	0	0	0	0	0
Pratt	2	0	0	2	0	0	0	0	0	0	0	0	0	0
Rawlins	0	14	0	2	0	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Republic	1	0	4	5	0	0	0	1	0	0	0	0	0	0
Rice	0	0	7	0	0	0	4	0	0	0	0	0	0	0
Riley, except Manhattan	1	0	0	0	0	0	0	1	0	1	0	0	0	0
Rooks	0	0	0	3	0	0	1	0	0	0	1	0	0	0
Rush	0	2	0	0	0	0	0	0	0	2	0	0	0	1
Russell	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Saline, except Salina	0	0	1	0	0	0	1	0	0	0	0	1	0	0
Saline	0	0	12	0	1	0	0	5	0	0	0	0	0	0
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgewick, except Wichita	2	1	0	0	3	0	0	0	0	0	0	0	0	0
Sedgewick	9	0	28	15	0	0	7	6	2	0	0	0	0	92
Seward	0	0	1	3	0	0	0	0	1	0	0	0	0	0
Shawnee, except Topeka	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Shawnee	3	0	11	2	2	0	28	0	0	0	0	0	0	2
Sheridan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sherman*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Stafford	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	1	0	2	9	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington	1	1	4	14	0	0	0	3	3	0	0	2	0	0
Sumner	0	0	23	3	0	0	0	0	0	0	0	0	0	0
Thomas	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Trego	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Wabaunsee	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Wallace*	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	1	0	27	0	0	0	0	0	7	1	0	0	0	1
Woodson	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except Kansas City	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Wyandotte	2	0	41	15	3	1	0	7	2	3	0	0	0	54
Wyandotte	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*No report.

Other communicable diseases: Anthrax, 1; cancer, 23; chancre, 5; erysipelas, 2; gonorrhea, 206; malaria, 2; opthalmia neonatorum, 2; septic sore throat, 7; syphilis, 71; tonsillitis, 6; trachoma, 18.

Repopulating the Earth.

NEWELL DWIGHT HILLIS, in *McClure's*.

The Great War has brought to the American people a sudden and brutal awakening to the dangers of the repopulation of our country with undesirable citizens. Thousands of anti-Americans have had to be shut up in internment camps; hundreds of Bolsheviki deported or imprisoned; we have between 2,000,000 and 3,000,000 defectives; 200,000 soldiers, out of 2,000,000 sent abroad, were unable to read or write to their friends; 10,000,000 are technically illiterate, and 20,000,000 of all races and colors essentially illiterate—a group of facts that is ugly and most disquieting. Experts are stressing the threatened breakdown of the American physique. Various commissions have issued warnings that war, nervous excitement, drunkenness, vice, overworking of poor parents and underfeeding of their children, will bring about race deterioration, and possibly race extinction. We have improved our spectacles, but are losing our eyesight; we are enlarging our looms, but we are stiffening our fingers; improving our foods, but losing our digestions. But all fine thinking stands on fine brain fibre. The Parthenon and the statues of Athens were so superior that their very fragments are the despair of our American sculptors and architects, yet the superiority of the Athenian's art was in the quality of his brain and nerve as instruments of fine thinking. If we let the Parthenon stand for Athens, the picture gallery for Italy, the chateau for France, the Cathedral for England, the emblems of the United States are splendid steel buildings, and vast asylums for the defective, the insane, and the invalided.

WARNINGS BY EXPERTS.

Our medical journals are filled with warnings. The first indication of the breakdown of a race, whether the race is Roman, Grecian, or Assyrian, is found in the inability of their women to produce large, strong and healthy children. The New York bureau of municipal research has examined fifteen hundred school children in the Bowery district and ninety-three out of every one hundred have imperfect teeth, faulty heart action, subnormal sight and hearing. And that race has started to go to pieces whose mothers have so little vitality that they cannot build enamel for the teeth, or construct a perfect lens for the child's eye. When the mother has all the blood and nerve she needs for herself, the excess goes to build a perfect babe. In Manchester, England, among the factory classes, an exhaustive study showed that only ten per cent of the children had perfect teeth, while teeth taken from a plague pit into which the bodies were cast after the Black Death of two centuries ago showed faultless enamel even in very aged people.

In 1813 the British standard for admission to the army was six feet; in 1845 the standard had to be dropped to five feet six inches; in 1883 it was lowered to five feet and three inches; during the Boer War it was lowered to five feet; and in 1915 and 1916 practically all standards had to be dropped. The decrease in the birth rate also indicates a national breakdown. And even of the women that bear children, Dr. Holt says

that three children out of four born in the homes of the well-to-do classes here in the United States must be fed at some other fount than at the maternal breast.

ONE GROUP OF AMERICANS IMPROVING, ANOTHER DETERIORATING.

The simple fact is that the better element of our race, that gives proper time to exercise in the open air, and is obeying the laws of nature, is growing taller and stronger, healthier and handsomer, while the other half of our race is degenerating, steadily losing in stature, beauty and health toward the point of extinction. Our dry climate is full of ozone, and, therefore, is exciting, stimulating to the nerve and heart. Also the stories of self-made men who have made marvelous successes have become a spur to ambition, while the pace has become so fast that all save the strongest soon fall by the way. The new chemistry, also, has discovered new stimulants, with drugs for the brain, nerves and heart, until wine, beer, whisky, absinthe, that once could be endured without immediately fatal results, because of the simplicity of life among our fathers, have now become deadly to their sons. Living in our American climate and fulfilling their career despite conditions that are most complex, young men use whisky and deaden the nerve by excessive amounts of nicotine, and their excitable nervous system is reproduced in the babe, with the result that defective children are one of the most alarming facts of our era.

THE DEFECTIVE CLASS

The head of the department of public health in New York has made a report that we now have in the United States two million defective and feeble-minded people, who have been classified, and another million of defectives who should have been included, but escaped by reason of the influence of their relatives. It is a notorious fact that the lowest classes rear very large families. The lioness produces one lion; the cat many kittens; thus, the upper classes have small families, and the illiterates and defectives very large ones. Our republic had three million people in 1776, and now has one hundred and ten millions. Left to themselves, are these three million defectives to increase another one hundred and ten millions? So great has become the peril that several states have passed laws and appointed commissions of physicians and surgeons to perform a certain painless operation that makes propagation impossible for mental defectives and those moral idiots called "confirmed criminals." Unfortunately this law carries no sanction or penalty, and for that reason its purpose has been defeated. Now has come a moment when army physicians have become so alarmed that they are preparing the agitation of a movement to secure a law that will make compulsory the sterilization of defectives and criminals in every state of the Union.

THE COLLAPSE OF THE MELTING-POT IDEA.

Bitter disappointment also has followed the collapse of the melting-pot idea. That phase was so picturesque, rhythmical and encouraging that it captured the imagination of the American people, and was considered a justification of the open door to any and all immigrants. Multitudes came to think of the United States as a huge vessel whose one side was

the Alleghany mountains, with the Rockies for the other side, a vessel into which metals, precious and base alike, were being poured, while under the clouds of steam a transformation was being performed, in that all mud was becoming marble, and all clay gold. The melting pot delusion was backed up by superficial thinkers and politicians, who quoted what seemed to be history. These men never tired of telling how the Norman blood influenced the old English stock; and how the Scotch moved to Belfast, bettered the Irish blood. But as a matter of fact history teaches the very opposite of the melting pot theory. It was because the Norman race was a distinctively superior man, that he sent warm light colors of wit, humor, imagination and beauty into the very warp and woof of the heavy Saxon stock, just as Scotch superiority lent solidity and seriousness to the gay and excitable Celtic temperament.

Every child is the sum of the physical and mental gifts that once were distributed among its ancestors, but at birth are swept together and compacted in a single life. The melting pot idea is the great American delusion. You cannot cross an American, who is all forehead, with certain low races, who are all backhead, without debasing the forehead, and lowering the level of the nation. Civilization represents the harvest of blood. Every form of advance owes its impulse to a great soul, with unique gifts. Back of the Hebrew code stands Moses; back of the Principia stands Newton; back of St. Peter stands Michael Angelo; back of our constitution stand Washington and Hamilton and Madison; back of every Renaissance stands a generation of great souls. One hundred and ten million stones brought together in one New England fence will not turn the stones into diamonds.

THE REPRODUCTION OF THE ILLITERATE CLASS.

From another viewpoint the American people have had a sudden awakening to the problems of repopulation. The announcement by the head of our army in France that we had sent across the seas two hundred thousand soldiers who could neither read nor write was received by the people at home with feelings at first of doubt, then of amazement, and finally of alarm. But men who have been in touch with soldiers abroad, have not been skeptical as to the peril of American illiteracy. Landing last summer at Liverpool we watched three thousand American boys step from the steamer to the English wharf. Before these columns started for the rest camp on the outskirts of Liverpool a chaplain ran along the lines distributing postal cards, and shouting, "Better write a few lines to the folks at home, saying you have landed and are well." The Y. M. C. A. secretaries called out, "You have only a few minutes; some of you may write slowly; if so, step over here and we will help you." To my astonishment, at least one hundred soldiers crowded about one chaplain. The simple fact was, these soldiers could not write themselves, and the chaplain met the emergency with the utmost tact. But every ignorant man is a dangerous man to the Republic.

For the farmers of Northern France and Belgium, one of the gravest problems is the unexploded bomb lying just beneath the soil. Experts, with electrical devices for detecting the presence of iron and steel, go over the field carefully and remove these dangerous explosives. Far

more perilous to the Republic are the twenty million illiterates who are unable to read paper, magazine or book, and are quite unfit to ask themselves the questions, "What is the truth about militarism? What are the facts about the taxes? What is Bolshevist truth and falsehood? What is the new Labor-Capital-Parliament in England?" Thoughtful men realize at last that we cannot run this republic any longer with five million voters who have to make their mark when they sign a note for ninety days, or receipt for the week's pay, or vote "sight unseen" on grave national problems.

Drug Analysis LIX.

L. B. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist;
G. N. WATSON, Analyst.

In submitting the fifty-ninth report we are again constrained to caution dispensers that among the many medicinal fluids that they are called upon to furnish, sweet spirits of niter seems to be the most troublesome. The tendency of this liquid is to form aldehyde. If the preparation be insecurely kept, aldehyde, in considerable proportion, may be found developed. This imparts to the liquid a pungent odor and an acrid flavor; is not only injurious to the preparation itself but adds an ingredient which is physiologically foreign to that of ethyl nitrite. This aldehyde, once formed, becomes acetic acid by absorbing oxygen.

It is well known that ethyl nitrite in hermetically sealed glass tubes is found on the market. C. M. Kline, of Philadelphia, originated this method of protecting ethyl nitrite. It affords a ready means of preparing small quantities of spirits of nitrous ether which, as before stated, deteriorates on keeping. These tubes should be kept in a cool place and should be cooled before opening and then the liquid immediately diluted with the proper quantity of alcohol to make the spirits of nitrous ether.

CARE OF SPIRITS OF NITROUS ETHER (SWEET SPIRITS OF NITER.)

Our inspectors not infrequently find this ethereal liquid kept, contrary to the directions of the U. S. P., in half-gallon or gallon bottles, exposed more or less directly to the sun's rays. This is sure to cause decomposition, but diffused light, if the preparation is kept in small, amber-colored bottles, causes little or no deterioration. Using every possible precaution, however, the delicate constituents of the liquid are likely to change, and the preparation becomes weaker, due to the escape of ethyl nitrite, for the boiling-point of this ethereal salt is so low (17° C.) that it readily escapes, even at ordinary temperatures, from the alcohol in which it is dissolved. The ethereal salt (or ester) readily undergoes hydrolysis by contact with water, ethyl alcohol and nitrous acid being formed. Hence, in making the liquid from the concentrated spirits of nitrous ether care should be used that the alcohol employed is the U. S. P. article. It has been found that some pharmacists neglect this point. Physicians especially are unmindful or ignorant of this when they prescribe the liquid in mixtures having an aqueous vehicle; it would probably be most advantageous to prescribe the preparation in such a way that it should be mixed with water at the time of administration.

Spirits of nitrous ether (sweet spirits of niter) is defined in U. S. P. as an alcoholic solution of ethyl nitrate containing not less than 3.5 per

cent nor more than 4.5 per cent of ethyl nitrite. There is a tolerance of 1 per cent of ethyl nitrite in this preparation which we believe is sufficient, providing it is kept in accordance with the directions of the U. S. P. This authority directs that spirits of nitrous ether be kept in small, well-stoppered, dark amber-colored bottles in a cool and dark place, remote from fire. It is very evident that the principal cause for deterioration in this product is the manner in which the merchant keeps it. Inspectors for this department have advised druggists, in their course of inspections, to use 4- or 8-ounce amber-colored bottles, which most any druggist has who handles fluid extracts, for storing their sweet spirits of niter. Most druggists, we have found, prepare this article by dilution of the concentrated with alcohol. After this is prepared it should be transferred to the 4- or 8-ounce amber-colored bottles and well corked. The dispensing should be done directly from these bottles," for the reason that they are generally large and colorless and from the time of opening until it is all used. It is very little trouble for a druggist to keep six or eight small, amber-colored bottles for storing "niter." We have always discouraged the use of the regular "shelf bottles" for the reason that they are generally large and colorless and contain glass stoppers. Cork stoppers are best.

In the drug laboratory we have been carrying on a series of experiments to show the effect of amber glass and that of light transparent glass bottles on the spirits. We have also compared the glass-stoppered and cork-stoppered bottles. It is needless to give the details of these experiments. We have found that the ordinary glass-stoppered bottle is less valuable than the cork-stoppered. For example, the spirit kept in amber 100 cc. glass-stoppered bottles lost in two weeks 0.4 per cent.; in well corked 100 cc. amber glass bottles 0.2 per cent. The amber glass proves itself far superior to ordinary colorless glass, as would be expected. Spirits of niter kept in half-gallon amber glass bottles lost its strength more than twice as rapidly, kept under the same conditions. It would seem, therefore, that the pharmacopoeial requirements should be strictly observed by pharmacists in keeping spirits of nitrous ether, otherwise there is great danger of its deterioration.

ESSENCE OF PEPPERMINT.*

Lab. No. 7469. Insp. No. 72009. B. D. Harrison, Atchison. Mils. of oil per 100 mls., 11.41. Above standard.

Lab. No. 7476. Insp. No. 72019. Mount-Mize, Atchison. Mils. of oil per 100 mls., 12.71. Above standard.

Lab. No. 7477. Insp. No. 72024. Brown Drug Co., Holton. Mils. of oil per 100 mls., 8.8. Substandard.

Lab. No. 7481. Insp. No. 50186. R. E. Hutchinson, Natoma. Mils. of oil per 100 mls., 10.43. Passed.

Lab. No. 7486. Insp. No. 50191. J. U. Catudal, Plainville. Mils. of oil per 100 mls., 10.43. Passed.

Lab. No. 7492. Insp. No. 72031. Reif Pharmacy, Leavenworth. Mils. of oil per 100 mls., 8.15. Substandard.

Lab. No. 7496. Insp. No. 72035. J. H. Callahan, Leavenworth. Mils. of oil per 100 mls., 9.78. Passed.

TINCTURE OF IODIN.†

Lab. No. 7467. Insp. No. 72005. B. B. Sams Drug Co., Vermillion. Pot. iodide per 100 mls., 4.48. Iodin per 100 mls., 6.77. Per cent alcohol, 91.5. Passed.

Lab. No. 7480. Insp. No. 50185. P. E. Hutchinson, Natoma. Pot. iodide per 100 mls., 5.38. Iodin per 100 mls., 7.46. Passed.

Lab. No. 7489. Insp. No. 72028. Rebman, Leavenworth. Pot. iodide per 100 mls., 4.85. Iodin per 100 mls., 6.78. Per cent alcohol, 87.25. Passed.

Lab. No. 7499. Insp. No. 72040. Lange Pharmacy, Leavenworth. Pot. iodide per 100 mls., 3.45. Iodin per 100 mls., 4.49. Per cent alcohol, 82.1. Contained fixed oil, 5.37 per cent. Adulterated.

* Essence of Peppermint should contain 9.5 to 10.5 mls. oil peppermint per 100 mls. of the essence.

† Tincture of Iodin should contain 6.5 to 7.5 gm. iodine and 4.5 to 5.5 gm. potassium iodide per 100 mls.

SWEET SPIRIT OF NITER.*

Lab. No. 7470. Insp. No. 72010. B. D. Harrison, Atchison. Per cent ethyl nitrite, 1.75. Substandard.

Lab. 7488. Insp. No. 72027. Davis-Christ, Leavenworth. Per cent ethyl nitrite, 3.2. Substandard.

Lab. No. 7495. Insp. No. 72034. J. H. Callahan, Leavenworth. Per cent ethyl nitrite, 2.6. Substandard.

Lab. No. 7500. Insp. No. 72041. Lange Pharmacy, Leavenworth. Per cent ethyl nitrite, 1.8. Substandard.

FORMALDEHYDE.†

Lab. No. 7468. Insp. No. 72008. B. D. Harrison, Atchison. Per cent CH_2O , 39.45. Passed.

Lab. No. 7473. Insp. No. 72016. Mount-Mize, Atchison. Per cent CH_2O , 39.05. Passed.

TINCTURE OF JAMAICA GINGER.‡

Lab. No. 7465. Insp. No. 72003. W. B. Sams, Vermillion. Per cent alcohol, 93.0. Grams extractive per 100 mls., 0.536. Not Jamaica ginger.

Lab. No. 7471. Insp. No. 72014. A. W. Steven & Co., Atchison. Per cent alcohol, 91.0. Grams extractive per 100 mls., 1.159. Passed.

Lab. No. 7474. Insp. No. 72017. Mount-Mize, Atchison. Per cent alcohol, 90.6. Grams extractive per 100 mls., 0.540. Not Jamaica ginger.

SPIRIT OF CAMPHOR.§

Lab. No. 7466. Insp. 72004. W. B. Sams, Vermillion. Gms. camphor per 100 mls., 9.44.

Lab. No. 7472. Insp. No. 72015. John Kaff, Atchison. Gms. camphor per 100 mls., 10.78.

Lab. No. 7475. Insp. No. 72018. Mount-Mize, Atchison. Gms. camphor per 100 mls., 11.14.

Lab. No. 7479. Insp. No. 50184. P. E. Hutchinson, Natoma. Gms. camphor per 100 mls., 10.54.

Lab. No. 7485. Insp. No. 50190. J. U. Cotudal, Plainville. Gms. camphor per 100 mls., 9.28.

ASPIRIN TABLETS.

Lab. No. 7451. Insp. No. 50172. L. C. Twidwell, Frankfort. Grains per tablet, 5.00.

Lab. No. 7478. Insp. No. 22763. Dr. Randalls' (request)., White City. Grains per tablet, 4.40.

Lab. No. 7483. Insp. No. 50188. R. W. Gilpin, Codell. Grains per tablet, 4.85.

LINSEED OIL.¶

Lab. No. 7448. Insp. No. 22723. Miller & Gillespie, Topeka. Sp. Gv., 0.930. Sapon. value, 195.00. Iodin value, 165.00. (Boiled.) Passed.

Lab. No. 7449. Insp. No. 22724. Miller & Gillespie, Topeka. Sp. Gv., 0.929. Sapon. value, 176.00. Iodin value, 145.30. (Boiled.) Adulterated.

Lab. No. 7456. Insp. No. 50181. G. B. Crandall, Jewell City. Sp. Gv., 0.926. Sapon. value, 189.09. Iodin value, 167.00. Passed.

MISCELLANEOUS.

Lab. No. 7421. Insp. No. ——. Drier. Fredonia Linseed Oil Co. Ash, 0.992 per cent (Oxide Lead); mineral oil, present; volatile matter, none; iodine value, 52.83; responded to test for resins.

Lab. No. 7450. Insp. No. 22725. Ground Chili Pepper. Request of Dr. Marshall, Hoisington. "Examine for Ptoimaines." None detected.

Lab. No. 7457. Insp. No. 22739. Coffee. Chicory, cereal and coffee detected. Contained approximately 85 per cent coffee.

Lab. No. 7458. Insp. No. 22740. Candy. To be examined for poison. None detected.

Lab. No. 7461. Insp. No. 22755. Wine, Beef and Iron. Alcohol, 18.12 per cent; total solids per 100 mls., 5.787 gm.; inorganic solids, 0.867 gm.; oxide of iron, 0.320 gm. per 100 mls.

Lab. No. 7484. Insp. No. 50189. Glycerin. R. W. Gilpin, Codell. Passed.

* Sweet spirit of niter should contain 3.5 per cent to 4.5 per cent of ethyl nitrite.

† Solution of formaldehyde should contain not less than 37 per cent of CH_2O .

‡ Tincture of Jamaica ginger should contain not less than 0.8 gm. extractive per 100 mls., and not less than 91 per cent alcohol by volume.

§ Spirit of camphor should contain 9.5 to 10.5 gm. camphor per 100 mls.

¶ Linseed oil should conform to the standard as given in house bill No. 184, chapter 179, Laws of 1911.

What We Know About Cancer.

(A hand-book for the medical profession, prepared by a committee of the American Society for the Control of Cancer, American Medical Associated Press, Chicago, 1918.)

The American Society for the Control of Cancer has been in existence and working effectively for a number of years. The sole object of the society, at present at least, is the "dissemination of facts in regard to cancer to the end that its mortality may be reduced by a wider knowledge of the disease."

The effort represented by the present pamphlet has perhaps the most far-reaching possibilities for good of any single attempt to lessen cancer mortality undertaken in this country.

It is no longer necessary to argue the point that delay is the one great factor in cancer mortality. At least four-fifths of cancer deaths could be prevented by early recognition. The conditions necessary for recognition of cancer in ample time for cure are not ideal but distinctly practicable. Public education is one important pathway of improvement, but education of the medical profession itself is of equal, if not greater, importance. Statistical studies have shown that in the majority of cases the doctor has had the cancer patient "under observation" over a year before efficient curative treatment is instituted. It is needless to state that during this year the majority of cases have changed from curable to incurable. As the pamphlet itself somewhat mildly puts it, "The conditions call for a far keener appreciation of responsibility for the mortality from cancer than now generally exists in the medical profession."

It is not possible here to abstract this pamphlet which is already so condensed. The general facts concerning cancer are outlined and then each important type and site of cancer is taken up in detail and the forms, symptoms, standard treatment, and results to be expected are outlined for each type.

The chief point we would make here is that if every medical man would study and seriously apply the teaching in this pamphlet, which he can read in an hour, the question of delay in cancer would be solved in so far as it is referable to the medical profession. The ultimate possible good obtainable from the widespread dissemination of this pamphlet is so great that we would urge every possible means to get it into the hands of as many medical men of all classes as possible. It can be had from the American Medical Association, 535 N. Dearborn street, Chicago, for 10 cents. If you are a trained surgeon get it. It will interest you. If you are further afield get it and study and apply it. If you feel misgivings that some of your cases in the past might have been saved had you been more sure and acted more promptly (and who of us does not have such misgivings) get it. It will help you in future cases.

PERSONAL—If this should meet the eye of J. Smith, come home, and you will learn something to your advantage—your wife is dead.—Advt. in a western newspaper.

Report of Division of Water and Sewage, October, 1919.

CHAS. A. HASKINS, Chief.

I.

PERMITS ISSUED FOR WATERWORKS AND SEWERAGE.

(Permits are issued when approved by engineer, following his investigation of local conditions and examination of plans and specifications for the proposed work, under the authority of the provisions of chapter 382, Laws of 1907, as amended by chapter 226, Laws of 1909.)

Place, Date of Permit, and Nature of Improvement.

Burns. October 13, 1919. Waterworks plant (new).
Coldwater. October 17, 1919. Sewer system and sewage disposal plant (new).
Florence. October 18, 1919. Sewer system and sewage disposal plant (new).
Caldwell. October 22, 1919. Waterworks extensions. New wells are being constructed in accordance with order of State Board of Health, dated July 1, 1916.
Marysville. October 23, 1919. Sewer extensions.

Plans or preliminary reports have been received from the following places:

Place and Nature of Improvement.

Galena. Water works. New source of supply (deep wells), in accordance with order of State Board of Health, dated April, 1916.
Valley Center. Waterworks. New plant.
Colby. Sewer system and sewage disposal plant (new).
Oil Hill. Sewer system and sewage disposal plant.

II.

Record of analyses made in water and sewage laboratory at Lawrence during October.

<i>Sources of Sample.</i>	<i>Bacteriological.</i>	<i>Chemical.</i>	<i>Miscel.</i>
City water supplies	384	43	..
Bottled waters	2	2	..
Private wells	33	1	..
Railroad supplies	18	..	..
Ice	7	..	..
Miscellaneous .....	...	..	41
TOTAL	444	46	41

Total number of analyses, 531. (This does not include analyses of water supplies made in field by the engineers of this department, with field bacteriological kit, engaged in testing and "tuning up" water purification plants.)

III.

Record of licenses issued or refused during the month, under authority of regulations adopted by State Board of Health, October 4, 1915, under provisions of chapter 327, Laws of 1915.

LICENSES ISSUED.*

Place, Date, Person or Firm, and Purpose.

Holton. 10-9-19. Peoples Ice & Storage Co. Manufactured ice.
Hutchinson. 10-9-19. Carey Salt Co. Manufactured ice.
Manhattan. 10-9-19. Huse & Page. Manufactured ice.

* Licenses for water to be used on railway passenger cars for the year January 1 to December 31. Licenses for bottled waters are for year July 1 to June 30. Licenses for ice (to be used for domestic purposes) are for year January 1 to December 31.

Place, Date, Person or Firm, and Purpose.

Chetopa. 10-18-19. Chetopa Ice & Bottling Wks. Manufactured ice.
 White Water. 10-18-19. Jones & Gill. Manufactured ice.
 Osawatomie. 10-8-19. Missouri Pacific. Railroad.
 McPherson. 10-8-19. Union Pacific. Railroad.
 Ellis. 10-8-19. Union Pacific. Railroad.
 Burlington. 10-9-19. Missouri, Kansas & Texas. Railroad.
 Bonner Springs. 10-16-19. Kansas City, Kaw Valley & Western. Railroad.
 Hiawatha. 10-18-19. Grand Island. Railroad.
 Atchison. 10-18-19. Burlington. Railroad.
 Atchison. 10-18-19. Missouri Pacific. Railroad.
 Atchison. 10-18-19. Santa Fe. Railroad.
 Concordia. 10-23-19. Missouri Pacific. Railroad.
 Concordia. 10-23-19. Burlington. Railroad.
 Concordia. 10-23-19. Santa Fe. Railroad.

LICENSES REFUSED.

Colony. 10-2-19. Santa Fe. Railroad.

Remember Thy Creator.

These hundreds of thousands of young chaps who are returning to their jobs of working, of playing, of loving and of being loved, could in this flush of their jubilant health do no better thing than to attach this ancient reminder securely to the tablets of their memory:

"Remember thy Creator in the days of thy youth ere the evil days draw nigh."

This is no exordium to righteousness.

It is a homely little hint about preserving your health, young man; a health that to-day seems as abounding as the eternal waters of the River of Life.

Health is something you care nothing about until it is mislaid, like your toothbrush, or your fountain pen.

But at forty, or fifty, or thereabouts, the average husky will stop and listen a bit.

Listen to the rumble of a protesting heart.

Listen to the jar of a kidney gone bad.

Listen to the whistle of a lung that has picked up a tack on the great white way.

Believe us, we know what we are talking about when we say that no material thing in this life is worth anything compared to the healthful body's power to do each day any job necessary.

Believe us also when we remark that right now, in the virile twenties, is the time to determine the sort of a time you are going to have living with yourself twenty years from now.

It is easy to keep your vigor; about all you need to do is to be half way sane in your habits; habits of work and habits of living.

"Remember thy Creator in the days of thy youth ere the evil days draw nigh."—*Indiana Bulletin.*

An enterprising editor offered a money prize for the shortest "short story" that could be written. The following won the prize:

"A lass loved a sailor.

Alas!"

The Possible Etiology of Yellow Fever.

Louisiana, and New Orleans in particular, has had ample reason in the past to pay serious attention to yellow fever. Quarantine and the destruction, however, of the "tiger" mosquito (the *Stegomyia* or *Aedes calopus*, having very nearly become an accomplished fact, renders the possibility of further invasions from endemic centers in the Central and South American coasts comparatively remote. Even though we have learned a great deal about the mode of transmission we are nevertheless completely in the dark as to the actual cause of yellow fever, or at least thought we were until Noguchi published his articles. He has demonstrated the presence of an organism which he calls the *Leptospira icteroides*, in the fresh blood of a number of yellow fever patients and has produced successful animal inoculation with patients' blood. The presence of a protozoan in the kidneys of wild rats and mice captured around Guayaquil, which produces symptoms analogous to those of infectious jaundice, presumed to be caused by the *Leptospira icterio-hæmorrhagica*, and the immunity conferred by injections of killed cultures of the *Leptospira icteroides*, leads Noguchi to believe that the latter differs only in its immunity reactions. It appears possible that some wild animal acts as the repository or natural host for an infection transferred to man through the mosquito bite. If this is the case, we have another parallel with the plague, and sleeping sickness, in which animals play the role of vectors.—*Louisiana Bulletin*.

Advice to the Nervous Woman.

Learn to control yourself. With windows open wide, throw yourself on the couch or bed and cover lightly, yet warmly. Relax every muscle in the body. Close your eyes. Get as nearly passive as you can. Let the bed hold you—don't try to hold the bed. Breathe in a deep, full breath, and while exhaling count ten, slowly. Keep your mind on the numbers. Repeat at least ten times. Lie still for a few moments.

This relaxing and passive condition will be hard at first, but keep at it, for it creates such a soothing, restful feeling that ere you are aware drowsiness overtakes you. Sleep a few minutes if you can.

Women troubled with nervousness will find a simple arrangement of the hair is best. Arise, brush your hair with long strokes, comb out carefully and arrange comfortably. Comfort is one of the great essentials. Dress in keeping with the season and take care there are no tight waist bands. Eat that which agrees with you and use your own judgment as to quantity. Fruit is generally good in the morning, but each individual should be guided by his own reason and experience. If you have household duties, go about them cheerfully, trying constantly to stop the rush of thoughts that crowd the mind of the nervous being. As soon as you find your head "ready to run away with itself" stop whatever you may be doing, go outdoors and inhale the lungs to their fullest

capacity. Come in and lie down for a short while—two minutes if you cannot take longer. Relax all of your muscles and keep your mind as free from thought as you can. After a few days of this you will feel greatly benefited.

If you can so arrange it, go for a walk in the morning, even though it be short. The fresh air will do you good, always remembering to take deep, full breaths.—*The Healthy Home*.

Kansas Supreme Court Decision on Venereal Disease Control.

The recent opinion of the Kansas Supreme Court in denying the application for writ of *habeas corpus* for three venereally infected men who were by the city health officer of Topeka ordered to be placed in a state quarantine camp for men at Lansing, was one of the most sweeping decisions in its effect upon the control of communicable diseases, particularly venereal disease, that has yet been made by any court in the country.

State boards of health, acting under proper statutory authority, may provide any reasonable means and measures for the detection, suppression, quarantine and treatment of venereally infected men or women whose conduct makes them a menace to the public health, as they may deem necessary for the protection of the public health, with the knowledge that such action is entirely within their rights and duties.

The decision affirmed the constitutionality of the law under which the State Board of Health is operating for the prevention and control of communicable diseases, sustained the validity and reasonableness of the rules and regulations adopted thereunder, affirmed that the findings of the local health officer, in scientific procedure in determining diagnoses was conclusive in the absence of the charge of bad faith, and that the order for isolation and quarantine at the state quarantine camp, although the petitioners were able to provide proper treatment in their own locality or residence, was a proper order and function of the local board of health, and that the city ordinance of the city of Topeka which is, in effect, patterned after the model ordinance adopted by most of the municipalities in the country for the control of venereal diseases is sustained in its constitutionality.

Thus, the last obstacle to the state-wide drive on the "Red Plague" is removed. The Kansas State Board of Health proposes to continue the warfare with greater earnestness and effectiveness than hitherto, if possible.

Q. What is style?

A. Style is something we put on as much as possible.

Q. What is dress?

A. Dress is something the women take off as much as possible so as to be in style.—*Dearborn Independent*.

Alcohol in Medicinal Preparations.

There probably has not been a single question that has received more consideration in matters relating to medicine and pharmacy than that of alcohol. The nation-wide movement to limit the use of alcohol to very restricted lines is well recognized and receives the approbation of both the medical and pharmaceutical professions. From the last revision of the pharmacopœia there was deleted not only a number of preparations which would lend themselves to beverage purposes, but also such as were beverages in themselves. Even whisky, brandy and wine were eliminated, and, in many other cases, the percentage of alcohol in alcoholic preparations was materially reduced.

In view of the ratification of the amendment to the constitution providing for national prohibition, it would seem to be the part of wisdom to anticipate the tendency toward the use of alcoholic medicinal preparations as beverages, once that country-wide national prohibition is enforced. Accordingly, the Kansas State Board of Health, at its quarterly meeting held in Topeka October 18, 1919, passed the following resolution:

Be it Resolved, That it is the sense of the Board of Health of the state of Kansas that official medicinal preparations containing alcohol shall, in the finished product, contain only that amount of alcohol which is absolutely necessary for extracting the medicinal principles and for preserving the preparation, or to keep it from deterioration, and that the United States Pharmacopœia, tenth revision, expressly state this fact in its "General Principles."

It is further Resolved, That the attention of the Pharmacopœial Convention, which will meet in May, 1920, Washington, D. C., be called to this action.

A Letter to the Physicians of Kansas.

Dear Doctor: I am glad to announce the reopening of the Public Health (Wasserman) Laboratory at the School of Medicine, Rosedale, Kan., under the direction of Dr. Donald R. Black.

This is made possible by the gift of Federal funds which are available for venereal disease control. Physicians are, therefore, advised that for diagnostic purposes, in the control of venereal disease, the laboratory will examine free smears for gonococcus infection and the Wasserman blood test for syphilis. It is definitely understood that these free examinations cannot be made a matter of charge to patient by attending physician. Mailing cases for sending in specimens can be obtained by addressing The Public Health Laboratory, Rosedale, Kan.

Physicians are reminded that the diagnostic laboratory of the State Board of Health remains at Topeka, where specimens for diagnoses in cases of suspected diphtheria, tuberculosis, epidemic meningitis, etc., should be sent addressed to Dr. S. E. Greenfield, 1105 West 10th St., Topeka, Kan.

The water and sewage laboratories of the board are located at the University at Lawrence. Containers for sending in samples of water for examination in cases of suspected pollution may be secured by addressing Prof. C. A. Haskins, C. E., Kansas University, Lawrence, Kan.

Physicians are invited to use these laboratory facilities in the fullest extent for the control of communicable disease.

Sincerely,

S. J. CRUMBINE, M. D., *Secretary*.

The Silent March.

(Written after an inspection of the thirty-odd maternity and children's homes in Kansas, by the Chief of the Division of Child Hygiene, Kansas State Board of Health.)

From out the open doors of shattered homes
An endless line, a thousand new each year
Step softly through our State.
So still they are we scarcely know they're here.
Too soon they learn to hush the joyous mirth of childhood's
happy play.
Repressed, they march to meals, to tasks, to play, to bed.

Sometimes they're roused from slumbers sweet at early morn
To prayers of thankfulness for Charity's poor sop.
Sometimes they're made to kneel upon cold stone for punish-
ment, until their hurt nerves shriek,
And then sent supperless to bed.
The shears of Order clip the out reached tentacles of growing
minds,
And stiff and still they stand in hedge-like front,
And people say, "How fine!"
But worst of all, these hurt ones never feel the clasp of under-
standing arms,
Or ever lay wet cheek against the warm caress of one who cares.

In crowded loneliness and stultifying fear
These prisoners of charity mark time,
Until the gate of citizenship swings wide
And they are thrust outside.
Then, dazed and staggering, they're told
That they must walk alone.
If now their unaccustomed feet should slip
Swift falls the arm of law,
And they once more—mark time!

Awake, Oh State, and hark this muffled tread.
Your children claim your care. *No parent else have they!*
Will you stretch out parental arms and fill your empty homes
With heart-starved little ones?
Or shall they still march, chill and hurt,
And turn on you the tragic wonder in their eyes?

—*Florence Brown Sherbon, M. D.*

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

December, 1919

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FORWARD!

Good night, 1919.

Good morning, 1920.

Good teeth make for good health.

Smallpox is an "optional" disease.

The season's greatest danger—pneumonia.

The unvaccinated continue to have smallpox.

Has your community a public health nurse?

National strength and national recuperation is conditioned on the health of the people.

May your New Year be a Happy New Year because of worth-while accomplishment.

The following counties in Kansas now have full-time health organizations: Butler, Cherokee, Marion, Geary and Morris. Who will be the next?

It is scarcely less than a disgrace to have smallpox when immunity can be secured at so little pain and expense. The same can be said of typhoid fever.

MORBIDITY REPORT FOR NOVEMBER, 1919.

[illegible]

Look Out for Scarlet Fever.

There has been a marked increase in the number of cases of scarlet fever during October, November and December. The increase has been general throughout the state. In no localities has the disease approached epidemic form, but October, November and December are not the months in which we anticipate serious outbreaks of scarlet fever. January, February and March are the "scarlet fever months." However, a study of scarlet fever prevalence during the last ten years shows very clearly that when there is an increase in the number of cases in the first three months of the school year, a serious outbreak invariably follows.

The cases that have been reported thus far have generally been of mild character, so mild that many cases are not recognized. The following quotation from a letter recently received from a health officer describes the character of the cases confronted:

"We have quite a number of cases of scarlet fever at present, all very mild; so mild that some never know they are sick until we find them shedding their skin."

Such cases attend school and spread the disease. It therefore behooves every health officer, every physician and every school teacher to be on the lookout for suspicious cases. If the doctors promptly report and quarantine every case they know of; if the health officers respond to the notices given them by the doctors and teachers, and investigate every case and see that they are quarantined; and if the teachers send home every child that shows the faintest symptoms of scarlet fever or any other disease, and see that the child does not return to school without a written certificate signed by a physician or the health officer stating that he is not infected with a contagious disease, an epidemic can and will be prevented.

On the other hand, if these precautions are not taken, we must anticipate an epidemic of scarlet fever during January, February and March.

Chicken Pox in Adults Treated as Smallpox.

We have received letters from a number of health officers complaining that the physicians do not report cases of chicken pox in adults as smallpox. These complaints are a result of improper construction of the regulations of the State Board of Health. The regulations do not require a physician to report cases of chicken pox in adults as cases of smallpox. It would be absurd to make a regulation requiring a physician to report as smallpox a case he has diagnosed as chicken pox.

On the other hand, the fact that chicken pox is rare in adults, and the fact that mild cases of smallpox are not infrequently mistaken for chicken pox, has resulted in the State Board of Health making a regulation requiring that cases of chicken pox in adults be quarantined in the same manner as is smallpox.

The requirement is not with regard to what the disease shall be called; it is a requirement for quarantine and not for diagnosis. Therefore, when a disease in an adult is diagnosed as chicken pox, the quarantine requirement for such a case is the same as the quarantine requirement for a case of smallpox.

Report of Division of Water and Sewage, November, 1919.

CHAS. A. HASKINS, Chief.

I.

PERMITS ISSUED OR REFUSED FOR WATERWORKS AND SEWERAGE.

(Permits are issued after application is approved by engineer, following his investigation of local conditions and examination of plans and specifications for the proposed work, under the authority of the regulations adopted under the provisions of chapter 382, Laws of 1907, as amended by chapter 226, Laws of 1909.)

Place, Date of Permit, and Nature of Improvement.

- Emporia. Permit for sewer extensions refused, pending action by city toward constructing sewage disposal plant.
- Overland Park. Permit to furnish water for domestic use by Strang Land Company refused, pending installation of water purification plant.
- Oswego. Permission to make certain changes in plans for waterworks extensions, approved July 7, 1919, was granted without formal application.
- Lyndon. Permission was granted without formal application for temporary use of new water intake in Salt Creek, made necessary by water shortage.
- Manhattan. Permission was granted without formal application for construction of an additional well, made necessary by water shortage.
- Council Grove. Permission was granted without formal application for construction of an emergency well for use during temporary shortage of water in Neosho river.
- Scott City. Extension of time for submission of plans for new water supply was granted.
- Valley Center. Plans for water supply approved tentatively, pending completion of well.

I A.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for New York at following places.

- La Cygne. New water supply.
- Protection. Sewer system.
- Galena. Waterworks. See October report.
- Cheney. Waterworks plant and sewer system.
- Smith Center. Sewer system.
- Scott City. Sewer system.
- Salina. Sewer extensions.
- Sedgwick. Sewer system.
- Baxter Springs. Completion of waterworks plant and sewer system.

II.

Record of analyses made in water and sewage laboratory at Lawrence during November.

<i>Source of sample.</i>	<i>Bacteriological.</i>	<i>Chemical.</i>	<i>Miscel.</i>
City water supply.....	310	16	..
Bottled waters	2	2	..
Private supplies	108	..	..
Railroad supplies	10	..	..
Ice	4	..	..
Chloride determinations .....	..	..	8
Sand analyses .....	..	..	2
TOTAL	434	19	10

Total number of analyses, 463. (This does not include analyses of water supplies made in field by engineers of this department with field bacteriological kit, engaged in testing and "tuning up" water purification plants.)

III.

Record of licenses issued or refused during the month, under authority of regulations adopted by State Board of Health, October 4, 1915, under provisions of chapter 327, Laws of 1915.

LICENSES ISSUED.*

Place, date, person or firm, and purpose.

Kinsley. 11-10-19. Kinsley Artificial Ice Co. Manufactured ice.
Macksville. 11-10-19. Macksville Light & Ice Co. Manufactured ice.
Plainville. 11-10-19. G. K. McClay. Manufactured ice.
Highland. 11-19-19. Chas. B. Hughes. Manufactured ice.

RAILROAD WATER SUPPLIES.

Salina. 11-4-19. C. R. I. & P. R. R. Railroad.
Ellinwood. 11-6-19. A. T. & S. F. R. R. Railroad.
Great Bend. 11-6-19. A. T. & S. F. R. R. Railroad.
Ellsworth. 11-18-19. St. L. & S. F. R. R. Railroad.

LICENSE REFUSED.

Plainville. 11-7-19. Union Pacific R. R. Railroad.

A Letter of Interest to Ice Dealers.

"DR S. J. CRUMBINE, *Secretary*,
Kansas State Board of Health, Topeka, Kan.

"*Dear Doctor Crumbine:* Since the recent cold spell a considerable number of communications have been received by the water and sewage laboratory inquiring about the regulations of the State Board of Health concerning natural ice. Some persons apparently believe that the State Board of Health is prejudiced against its use, but this is not the case.

"The regulations of the board provide the same standard for natural as for artificial ice (less than 100 bacteria per cubic centimeter and no organisms of the *bacillus coli* group in one cubic centimeter), and it is interesting to note that the records on file here show many natural ices to have been found of satisfactory quality and licensed, since the adoption of these regulations, and also that a number of artificial ices have been unable to pass the test.

"If the water from which ice is manufactured is of satisfactory quality to start with, then it is simply a matter of cleanliness and care about the plant to be able to produce a safe and satisfactory ice. Cans must be kept clean and they should be sterilized at frequent intervals. Covers should likewise be taken care of properly. Scrapings from shoes and dust and dirt from other sources must be scrupulously looked after.

"Likewise in the production of natural ice, the water which is frozen should be practically clean. No drainage from sewers, or even the run

* Licenses for water to be used on railway passenger cars for the year January 1 to December 31. Licenses for bottled waters are for the year July 1 to June 30. Licenses for ice (to be used for domestic purposes) are for year January 1 to December 31.

off from thickly populated areas, barnyards, feed lots, etc., should be permitted to reach it. A practice often resorted to of flooding the ice in order to thicken it is to be condemned, for whatever impurities the water carries onto the ice have no chance to be eliminated through the process of crystallization when frozen in the natural way. Ice should not be flooded. The ice should be harvested and stored in a proper and cleanly manner, packed in clean straw or other suitable material.

"Freezing does not destroy bacteria immediately, but many of them die when ice is stored for a few months. For that reason ice improves in quality from a bacteriological standpoint when properly stored, and, therefore, natural ice has an advantage over manufactured ice because the latter is usually sold within a short time after its manufacture, while the former is usually stored several months before it is sold.

"The ice shortage experienced in this state practically every summer, particularly in the smaller communities, necessitates the use of the natural product, but care should be taken in the selection of its source. The regulations of this board permit the use of ice which does not pass the tests for *cooling purposes only, and not for use in household refrigerators, or where it may come in contact with food or beverages.*

"Therefore, it is urged that full advantage be taken of properly situated ponds and streams during cold periods like the one just passed.

"Yours very truly,

"CHAS. A. HASKINS, *Chief Engineer.*"

The above recommendations were concurred in and should be carefully observed by all interested.

S. J. CRUMBINE, M. D., *Executive Officer.*

Food Analysis LXV, September and October.

E. H. S. BAILEY, Director, Food Laboratory; W. S. LONG, Chemist in Charge;

E. L. TREECE, Bacteriologist.

BEVERAGES.

- 72006. "Fruit Nectar Compound." Brechet & Richter Co., Pure Food Products, Minneapolis, Minn. An imitation product. Misbranded.
- 72022. "Grape Pop." Holton Bottling Works, Holton. Retailer, Clyde Gay, Holton. Passed.
- 72023. "Lemon Pop." Holton Bottling Works, Holton. Retailer, Clyde Gay, Holton. Passed.
- 72038. "Grape Pop." Becker & Haas, Leavenworth. Retailer, Becker & Haas, Leavenworth. Contains saccharin. Illegal.
- 81213. "Lemon Pop." J. F. McKinney, Columbus. Retailer, S. H. Thomas, Columbus. Passed.
- 81214. "Strawberry Pop." J. F. McKinney, Columbus. Retailer, S. H. Thomas, Columbus. Contains saccharin. Illegal.
- 81215. "Lemon Pop." Forsythe Bros. Retailer, B. Tappiro, Mulberry. Passed.
- 81216. "Strawberry Pop." Forsythe Bros. Retailer, B. Tappiro, Mulberry. Contains saccharin. Illegal.
- 81217. "Strawberry Pop." Pittsburg Steam Bottling Works, Pittsburg. Retailer, Pittsburg Steam Bottling Works. Contains saccharin. Illegal.
- 81218. "Cherry Pop." Pittsburg Steam Bottling Works, Pittsburg. Retailer, Pittsburg Steam Bottling Works, Pittsburg. Contains saccharin. Illegal.
- 81219. "Strawberry Pop." Coco Cola Co., Pittsburg. Retailer, Coco Cola Co., Pittsburg. Contains saccharin. Illegal.
- 81220. "Lemon Pop." Coco Cola Co., Pittsburg. Retailer, Coco Cola Co., Pittsburg. Contains saccharin. Illegal.
- 81221. "Orange Pop." Coco Cola Co., Pittsburg. Retailer, Coco Cola Co., Pittsburg. Contains saccharin. Illegal.

MISCELLANEOUS.

22746. "Vinegar." Ozark Cider & Vinegar Co., Rogers, Ark. Retailer, Iola Wholesale Grocery Co., Iola. Low in alkalinity.
 22747. "Vinegar." Ozark Cider & Vinegar Co., Rogers, Ark. Retailer, Iola Wholesale Grocery Co., Iola. Low in alkalinity.
 22749. "Vinegar." Ozark Cider & Vinegar Co., Rogers, Ark. Retailer, Iola Wholesale Grocery Co., Iola. Low in alkalinity.
 22752. "Canned Tomatoes." Ralph Riffin & Bros., Crisfield, Md. From Woodward, Okla. Passed.
 22753. "Canned Tomatoes." J. M. Sterling, Crisfield, Md. From Woodward, Okla. Passed.
 72010. "Vanilla." Mount-Mize Drug Co., Atchison. Salesman, J. Mount. Bought at wholesale house. Passed.
 93250. "Ice Cream." Gilmore & Taylor. Retailer, Gilmore & Taylor, Elkhart. Fat, 10.4. Illegal.
 259. Sweet Corn. Packed by O. E. Sears & Co., Circleville, Ohio. Jobber, Reid Murdock & Co., Chicago, Ill. Retailer, The Dibble Grocery Co., Topeka. Passed.
 1206. Canned Peas. Sent by Henneberry & Co., Arkansas City. Passed.
 1211. Ice Cream Cones. Sent in by Roberts Cone Manfg. Co., St. Joseph, Mo. Passed.

MILK SAMPLES FROM LAWRENCE, KANSAS, ANALYZED DURING SEPTEMBER, 1919.

1213. Brown. Fat, 3.30 per cent. Bacteria, 240,000. No *B. coli* present. Visible dirt present.
 1214. Mason. Fat, 3.90 per cent. Bacteria, 160,000. *B. coli*, 100. No visible dirt.
 1215. Starnes. Fat, 2.50 per cent. Bacteria, 4,000,000. *B. coli*, 100. No visible dirt.
 1216. Gerhart. Fat, 3.60 per cent. Bacteria, 600,000. No *B. coli* present. No visible dirt.
 1217. Chamney. Fat, 3.20 per cent. Bacteria, 30,000. *B. coli*, 100. No visible dirt.
 1218. Miller. Fat, 3.90 per cent. Bacteria, 50,000. No *B. coli* present. No visible dirt.
 1219. Kelley. Fat, 3.70 per cent. Bacteria, 100,000. No *B. coli* present. No visible dirt.
 1220. S. R. White. Fat, 4.10 per cent. Bacteria, 60,000. No *B. coli* present. No visible dirt.
 1221. McQueen. Fat, 3.30 per cent. Bacteria, 400,000. *B. coli*, 1,000. Visible dirt present.
 1222. McQueen. Fat, 2.90 per cent. Bacteria, 100,000. *B. coli*, none. Visible dirt present.
 1223. Fritzel. Fat, 3.75 per cent. Bacteria, 500,000. *B. coli*, 10,000. Visible dirt present.
 1224. Perry. Fat, 5.20 per cent. Bacteria, 300,000. *B. coli*, 10,000. No visible dirt present.
 1225. Owens. Fat, 2.50 per cent. Bacteria, 200,000. *B. coli*, 10,000. Visible dirt present.
 1226. J. A. Winchell. Fat, 3.70 per cent. Bacteria, 2,000,000. *B. coli*, 10,000. No visible dirt present.
 1227. Long. Fat, 4.80 per cent. Bacteria, 2,000. No *B. coli* present. No visible dirt.
 1228. Smith. Fat, 4.30 per cent. Solids not fat, 7.59 per cent. Visible dirt present.

Drug Analysis LX.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist;
 G. N. WATSON, Analyst.

In submitting the sixtieth report of the drug laboratory it seems advisable to call attention to the propensity of aspirin to decompose. In moist atmospheres it is sure to break down or hydrolyze into its elementary constituents, namely, salicylic acid and acetic acid. It should be known that when acetyl salicylic acid is brought into contact with aqueous fluids it will gradually break down in these elements. The probability is that the superiority of aspirin over salicylic acid as a therapeutic agent is due partly to the fact of breaking down gradually of this complex compound into its more simple elements in the presence of aqueous fluids.

ASPIRIN TABLETS.

- Lab. No. 7503. Insp. No. 50194. Baldwin & Co., Osborne. Contained 4.9 grains. Passed.
 Lab. No. 7506. Insp. No. 50197. C. M. Utt, Downs. Contained 4.7 grains. Passed.
 Lab. No. 7511. Insp. No. 50202. Dr. Joseph Shaffer, Simpson. Contained 4.9 grains. Passed.
 Lab. No. 7512. Insp. No. 50203. D. C. Lieurance, Scottsville. Contained 5.2 grains. Passed.

- Lab. No. 7513. Insp. No. 50204. D. C. Lieurance, Scottsville. Contained 4.9 grains. Passed.
 Lab. No. 7530. Insp. No. 50223. W. L. McCarty, Concordia. Contained 4.72 grains. Passed.
 Lab. No. 7538. Insp. No. 50231. A. J. Gennette, Clyde. Contained 5.14 grains. Passed.
 Lab. No. 7546. Insp. No. 50235. Newman Bros., Leonardsville. Contained .0456 (.7 gr.) gms. salicylic acid and about 4.3 gr. aspirin. Showed evidence of decomposition. Deteriorated.

SWEET SPIRIT OF NITRE.*

- Lab. No. 7516. Insp. No. 72046. Mount-Mize, Atchison. Contained 2.83 per cent ethyl nitrate. Substandard.
 Lab. No. 7520. Insp. No. 72050. C. A. Sautter, Horton. Contained 1.6 per cent ethyl nitrite. Substandard.
 Lab. No. 8529. Insp. No. 50222. W. L. McCarty, Concordia. Contained 2.66 per cent ethyl nitrite. Substandard.

TINCTURE OF IODINE.**

- Lab. No. 7508. Insp. No. 50199. W. E. Keef, Glen Elder. Contained 6.6 gm. iodine and 4.6 gms. potassium iodide per 100. Passed.
 Lab. No. 7517. Insp. No. 72047. A. R. Adams, Easton. Contained 5.95 gms. iodine and 3.58 gms. potassium iodide per 100 mls. Substandard.
 Lab. No. 7536. Insp. No. 50229. H. E. Isaacson, Clyde. Contained 6.45 gms. iodine and 4.49 gms. potassium iodide per 100 mls. Passed.
 Lab. No. 7542. Insp. No. 72054. J. C. Fuger, Fairview. Contained 4.76 gms. iodine and 2.02 gms. potassium iodide per 100 mls. Substandard.

ESSENCE OF PEPPERMINT.***

- Lab. No. 7501. Insp. No. 50192. Baldwin & Co., Osborne. Contained 10.43 mls. oil per 100 mls. Passed.
 Lab. No. 7505. Insp. No. 50191. Ebnoter & Co., Downs. Contained 11.44 mls. oil per 100 mls. Passed.
 Lab. No. 7510. Insp. No. 50201. W. E. Keef, Glen Elder. Contained 11.24 mls. oil per 100 mls. Passed.
 Lab. No. 7514. Insp. No. 72044. J. A. Swann, Lansing. Contained 5.57 mls. oil per 100 mls. Adulterated.
 Lab. No. 7521. Insp. No. 72052. Brokaw Pharmacy, Hiawatha. Contained 6.52 mls. oil per 100 mls. Adulterated.
 Lab. No. 7524. Insp. No. 50212. Ed. Quenelle, Aurora. Contained 9.81 mls. oil per 100. Passed.
 Lab. No. 7526. Insp. No. 50219. F. F. Sorgatz, Concordia. Contained 2.94 mls. oil per 100 mls. Adulterated.
 Lab. No. 7528. Insp. No. 50221. Layton & Neilson, Concordia. Contained 6.84 mls. oil per 100 mls. Adulterated.
 Lab. No. 7531. Insp. No. 50224. W. L. McCarty, Concordia. Contained 10.75 mls. oil per 100. Passed.
 Lab. No. 7532. Insp. No. 50225. W. F. Neitzel, Concordia. Contained 10.43 mls. oil per 100. Passed.
 Lab. No. 7537. Insp. No. 50230. H. E. Isaacson, Clyde. Contained 8.15 mls. oil per 100. Substandard.
 Lab. No. 7539. Insp. No. 50232. A. J. Gennette, Clyde. Contained 8.80 mls. oil per 100. Substandard.
 Lab. No. 7545. Insp. No. 72058. Sherwood Drug Co., Sabetha. Contained 7.82 mls. oil per 100. Adulterated.

SPIRIT OF CAMPHOR.†

- Lab. No. 7487. Insp. No. 72026. Davis-Christ, Leavenworth. Contained 8.14 gms. camphor per 100 mls. Substandard.
 Lab. No. 7491. Insp. No. 72030. Mehl & Schott, Leavenworth. Contained 9.55 gms. camphor per 100 mls. Passed.
 Lab. No. 7494. Insp. No. 72033. Willcotts Pharmacy, Leavenworth. Contained 9.6 gms. camphor per 100 mls. Passed.
 Lab. No. 7498. Insp. No. 72037. J. N. Searcy, Leavenworth. Contained 9.72 gms. camphor per 100 mls. Passed.
 Lab. No. 7502. Insp. No. 50193. Baldwin & Co., Osborne. Contained 10 gms. camphor per 100 mls. Passed.
 Lab. No. 7504. Insp. No. 50185. Ebnoter & Co., Downs. Contained 10.48 gms. camphor per 100 mls. Passed.
 Lab. No. 7507. Insp. No. 50198. C. M. Utt, Downs. Contained 9.65 gms. per 100 mls.
 Lab. No. 7509. Insp. No. 50200. W. E. Keef, Glen Elder. Contained 10.45 gms. camphor per 100 mls. Passed.

* Sweet Spirit of Nitre should contain not less than 3.5 per cent nor more than 4.5 per cent of ethyl nitrite.

** Tincture of Iodine should contain not less than 6.5 gms. nor more than 7.5 gms. of iodine, and not less than 4.5 gms. nor more than 5.5 gms. of potassium iodide.

*** Essence of Peppermint should contain 10 mls. of oil of peppermint per 100 mls. of the preparation.

† Spirit of Camphor should contain 9.5-10.5 gms. of camphor per 100 mls. of the preparation.

- Lab. No. 7519. Insp. No. 72049. Smith & Lindsay, Horton. Contained 10.38 gms. camphor per 100 mils. Passed.
- Lab. No. 7518. Insp. No. 72048. A. R. Adams, Easton. Contained 10.92 gms. camphor per 100 mils. Passed.
- Lab. No. 7523. Insp. No. 50211. Ed. Quenelle, Aurora. Contained 10.6 gms. camphor per 100 mils. Passed.
- Lab. No. 7525. Insp. No. 50218. F. F. Sorgatz, Concordia. Contained 8.0 gms. camphor per 100 mils. and 10 per cent added water. Adulterated.
- Lab. No. 7527. Insp. No. 50220. Layton & Nielson, Concordia. Contained 9.6 gm. camphor per 100 mils. Passed.
- Lab. No. 7533. Insp. No. 50226. W. F. Neitzel, Concordia. Contained 9 gms. camphor per 100 mils. Substandard.
- Lab. No. 7534. Insp. No. 50227. Purity Drug Co., Concordia. Contained 8.26 gms. camphor per 100 mils. Substandard.
- Lab. No. 7535. Insp. No. 50228. H. E. Isaacson, Clyde. Contained 8.6 gms. camphor per 100 mils. Substandard.
- Lab. No. 7540. Insp. No. 50233. A. J. Gennette, Clyde. Contained 9.44 gms. camphor per 100 mils. Passed.
- Lab. No. 7541. Insp. No. 50234. Clyde Drug Co., Clyde. Contained 10.43 gms. camphor per 100 mils. Passed.
- Lab. No. 7543. Insp. No. 72055. J. C. Fuger, Fairview. Contained 8.67 gms. camphor per 100 mils. Substandard.
- Lab. No. 7549. Insp. No. 72061. J. H. Ellis, Highland. Contained 9.6 gms. camphor per 100 mils. Passed.

TINCTURE OF GINGER.††

- Lab. No. 7515. Insp. No. 72015. J. A. Swann, Lansing. Contained 0.844 gm. solids per 100 mils. and 91.5 per cent alcohol. Passed.
- Lab. No. 7544. Insp. No. 72057. Sherwood Drug Co., Sabetha. Contained 1.216 gm. solids per 100 mils. Passed.
- Lab. No. 7490. Insp. No. 72029. Mehl & Schott, Leavenworth. Contained solids 0.826 gms. per 100 mils. and 91 per cent. alcohol. Passed.
- Lab. No. 7493. Insp. No. 72032. Willcott's Pharmacy, Leavenworth. Contained 0.648 solids per 100 mils. and 91 per cent. alcohol. Substandard.

MISCELLANEOUS.

- Lab. No. 7482. Insp. No. 50187. Linseed oil. Mack-Welling Lumber Co., Natoma. Specific gravity, 0.925; 28° C.; iodine value, 172.00; saponification value, 184.00 (low).
- Lab. No. 7497. Insp. No. 72036. Carbohc acid. J. A. Searcy, Leavenworth. Contained 93.3 per cent. absolute phenol. Passed.
- Lab. No. 7459. Insp. 50182. Pepto-genic powder. L. H. Combs, Manhattan. Contained milk sugar, bicarbonate of soda and a proteid, probably pancreatin. Showed no amyolytic action.
- Lab. No. 7460. Insp. No. 50183. Pepto-genic powder. L. H. Combs, Manhattan. Contained sugar of milk, bicarbonate of soda and a proteid, probably pancreatin. Showed no amyolytic action.

Correction.

On page 169, Bulletin No. 10, October, 1919, under the report relating to nutmeg, second paragraph beginning with Lab. No. 7422, Insp. No. 22692, etc.

This paragraph should be transferred to the following paragraph under "Pepsodent," as this article referred to under these numbers relates to Pepsodent instead of nutmeg as indicated.

It should be stated also in this connection that bulletin No. 6 for June, 1919, page 90, refers to the article under consideration and gives the result of various analyses practically confirming the results of laboratory experiments reported in bulletin No. 10, namely, that results of various analyses indicate that pepsin in such combinations as Pepsodent is liable to deterioration.

Tabulating the samples referred to in bulletin No. 10 they appear as follows:

Undigested albumen.*

Lab. No. 7422.....	14 c. c.
Lab. No. 7423.....	7 c. c.
Lab. No. 7424.....	22 c. c.

†† Tincture of Jamaica Ginger should contain not less than 0.8 gm. of solids per 100 mils. and not less than 91 per cent absolute alcohol.

* An absolutely inert pepsin run through the same process as was employed yields a residue of undigested albumen of 23 c. c., thus indicating that in sample 7424 the constituent pepsin had become deteriorated so as to be valueless as a digestive ferment.

EXPLANATION.

Report on sample, Linseed Oil, Lab. No. 7449, Inspector's No. 22724, Miller & Gillespie, Topeka, November, 1919, Bulletin, was published incomplete. This sample was collected by inspector on request of Miller & Gillespie Paint Company after the oil had been returned to them.

Food Analysis LXVI.

E. H. S. BAILEY, Director Food Laboratory; W. S. LONG, Chemist in Charge.

December 1, 1919.

BEVERAGES AND BEVERAGE SYRUPS.

- 50205. "Orange Crush." Orange Crush Co., Chicago, Ill. Retailer, Dick Bros., Lawrence. Sugar syrup, colored, flavored and acidified. Illegal.
- 50206. "Lemon Sour Pop." McNish Bottling Works, Lawrence. Retailer, A. McNish, Lawrence. Passed.
- 50207. "Lemon Sour Pop." McNish Bottling Works, Lawrence. Retailer, A. McNish, Lawrence. Passed.
- 50208. "Grape Soda Pop." McNish Bottling Works, Lawrence. Retailer, A. McNish, Lawrence. Passed.
- 50209. "Grape Soda Pop." McNish Bottling Works, Lawrence. Retailer, A. McNish, Lawrence. Passed.
- 50213. "Orange Smile." The Orange Smile Co., St. Louis, New York and New Orleans. Retailer, Concordia Bottling Works, Concordia. Sugar syrup, colored, flavored and acidified. Illegal.
- 50214. "Grape Pop." Concordia Bottling Works, Concordia. Retailer, Concordia Bottling Works. Saccharin present. Illegal.
- 50216. "Lemon Sour Pop." Concordia Bottling Works, Concordia. Retailer, Concordia Bottling Works. Saccharin present. Illegal.
- 60725. "Lemon Pop." Eagle Bottling Co., Kansas City, Mo. Retailer, Eagle Bottling Co., Kansas City, Mo. Saccharin present. Illegal.
- 60726. "Lemon Pop." Eagle Bottling Co., Kansas City, Mo. Retailer, Eagle Bottling Co., Kansas City, Mo. Saccharin present. Illegal.
- 60727. "Lemon Sour Pop." Eagle Bottling Works, Kansas City, Mo. Retailer, J. H. Cronar, Kansas City, Kan. Saccharin present. Illegal.
- 60728. "Lemon Smash." Retailer, Prairie Brew Bottling Co., Kansas City, Kan. Saccharin present. Illegal.
- 60729. "Orange Smash." Retailer, Prairie Brew Bottling Co., Kansas City, Kan., Saccharin present. Illegal.
- 60730. "Lemon Soda." Bennett & Son, McPherson. Saccharin present. Illegal.
- 60731. "Lemon Sour." Bennett & Son, McPherson. Saccharin present. Illegal.
- 60732. "Cherry Red Pop." Bennett & Son, McPherson. Saccharin present. Illegal.
- 81224. "Cascade Ginger Ale." Pittsburg Steam Bottling Works, Pittsburg. Saccharin present. Illegal.
- 81226. "Cherry Coke." Pittsburg Steam Bottling Works, Pittsburg. Saccharin present. Illegal.
- 81227. "Ginger Ale." J. F. Makinney, Columbus. Retailer, Fred Holstein, Columbus. Saccharin present. Illegal.
- 81230. "Godelle Ginger Ale." Coca Cola Bottling Works, Pittsburg. Retailer, Coca Cola Bottling Works, Pittsburg. Saccharin present. Illegal.
- 81231. "Cherry Pop." Forsythe Bros., Mulberry. Retailer, Forsythe Bros. Saccharin present. Illegal.
- 81233. "Ginger Ale." Forsythe Bros., Mulberry. Retailer, Forsythe Bros. Saccharin present. Illegal.
- 93245. "Grape Pop." W. B. Woods Manfg. Co., St. Louis, Mo. Retailer, The Dodge City Ice Cream Products Co., Dodge City. Passed.
- 93246. "Cherry Pop." The W. B. Woods Manfg. Co., St. Louis, Mo. Retailer, The Dodge City Ice Cream and Products Co., Dodge City. Passed.
- 93247. "Orange Soda." The W. B. Woods Manfg. Co., St. Louis, Mo. Retailer, The Dodge City Ice Cream and Products Co., Dodge City. Passed.
- 93248. "Cidero." The W. B. Woods Manfg. Co. St. Louis Mo. Retailer, The Dodge City Ice Cream and Products Co., Dodge City.
- 93249. "Apple Cider." Inland Products Co., Spokane, Wash. Retailer, W. C. Trapp, Feterita. Passed.

MISCELLANEOUS.

- 22760. "Vinegar." Speas Vinegar Co., Kansas City, Mo. Retailer. Rohlfing Wholesale Grocery Co., Leavenworth. Passed.
- 22761. "Tomatoes with Puree from Trimmings." Sunlit Fruit Co., San Francisco, Cal. Passed.
- 22769. "Grape Fruit." Immature. Illegal.
- 72011. "Vinegar." H. J. Heinz Co., Pittsburg, Pa. Retailer, Jackson Grocery Co., Atchison. Passed.

93218. "Cider Vinegar." Shull Mercantile Co., Plevna. Retailer, Shull Mercantile Co. Acidity, 2.16 per cent. Illegal.
93241. "Milk." M. E. Hall, Dodge City. Retailer, Paul H. Wilson, Dodge City. Fat, 3.1 per cent. Illegal.
- 9380A. "Cream." The Carlson & Frink Creamery Co., Larkspur, Colo. Retailer, M. M. Gwinner, Dodge City. Fat, 39.50 per cent. Passed.
- 9380B. "Cream." The Carlson & Frink Creamery Co., Larkspur, Colo. Retailer, M. M. Gwinner, Dodge City. Fat, 40 per cent. Passed.
- 93804C. "Cream." The Carlson & Frink Creamery Co., Larkspur, Colo. Retailer, M. M. Gwinner, Dodge City. Fat, 48 per cent. Passed.
93196. "Vinegar, Artificially Colored Distilled." Colby Bottling Works, Colby. Retailer, Farmers Union Store, Sharon Springs.

Death and Blindness Caused by Wood Alcohol.

ALARMING INCREASE IN FATALITIES FROM DRINKING POISONOUS PRODUCT REPORTED DURING RECENT WEEKS BY HEALTH AUTHORITIES.

Owing to the heavy increase recently noted in the number of deaths and cases of blindness resulting from the drinking of wood alcohol by those ignorant of its dangers, the National Committee for the Prevention of Blindness, 130 East Twenty-second street, New York, is sending broadcast special warnings of the tragic consequences which may follow the use of wood alcohol, denatured alcohol and medicated alcohol for beverage purposes.

Occasional cases of this nature have been occurring from time to time for many years, but since national prohibition went into effect there has been an alarming increase in all sections of the country due to the preparation of drinks in which wood alcohol has been used, or in some cases where it has been taken straight.

The harmful action of this poison comes not only from taking it internally, but may likewise be induced by breathing its fumes, and by absorption through the mucous membranes of the body. Its effects is usually noticeable very shortly after exposure. Within a few hours after drinking acute headache is noted, usually accompanied by violent attacks of vomiting, body pains, extending over the region of the kidneys, and excessive dizziness. Vision may become impaired, total blindness occur, and death itself result.

WOOD ALCOHOL.

The wood alcohol used in the United States is obtained chiefly from the destructive distillation of wood—hard wood, birch, beech, maple, oak, elm and alder being those most frequently used. The chief uses to which it is put are for the denaturing of grain alcohol; for various purposes in lines of common manufacture (especially as a solvent in the preparation of shellac, varnish, dyes, etc.) as an ingredient in medical and pharmaceutical preparations; in the chemical industries and as a fuel and illuminant.

Only within recent years has wood alcohol become so dangerous to life and sight. Formerly it was a dark, bad-smelling, bad-tasting fluid which no one was tempted to drink. Later, a process was developed by which this color, smell and taste are removed. Wood alcohol, when purified in this way, looks, smells and tastes like grain alcohol, and may thus be easily substituted for it by unscrupulous persons.

DENATURED ALCOHOL.

In 1906, Congress (following the lead of European countries) enacted a law permitting the general use of a tax-free industrial (denatured) domestic alcohol in order to stimulate industrial purposes for which the high cost of grain alcohol was prohibitive. Denatured alcohol usually consists of ninety per cent grain alcohol and ten per cent wood alcohol, thus rendering it unfit for drinking. It is being increasingly substituted for wood alcohol in many industrial uses, to eliminate the great dangers attendant upon the use of the latter.

MEDICATED ALCOHOL.

Pharmacists who hold permit and have given bond are allowed to medicate alcohol and sell it for nonbeverage purposes in quantities not exceeding one pint, provided they first medicate it in accordance with any one of nine formulas specified by the Commissioner of Internal Revenue, United States Treasury Department. Carbolic acid, formaldehyde and bichloride of mercury are the chief of these denaturing agents. The container of such medicated alcohol must bear a "Poison" label. The sale by pharmacists of medicated alcohol for industrial purposes is prohibited. It is sold chiefly for rubbing purposes.

In spite of these regulations and precautions some persons are using these poisons for drinking purposes, even at times completely disregarding the "Poison" label which may have appeared on the bottle. In other instances, the victims have been ignorant of the dangers of that which they were using—the beverage having been prepared by others and sold under false pretenses or under some misleading name. When the original manufacturer of mixtures of this nature can be apprehended he has been, in many instances, subjected to severe punishment by the courts.

WARNING.

One teaspoonful of wood alcohol taken internally is sufficient to cause total blindness—a larger quantity often causes death. If you value your eyesight or your life, never use wood alcohol, denatured alcohol or medicated alcohol for drinking purposes. Pass this knowledge on if you would assist in reducing the fatalities which are occurring from this cause.—*Illinois Health News*.

X-Ray by Express.

"The medical ignorance of some people is staggering," said Dr. Flexner. "I know an X-ray specialist who got a letter from a middle-western farmer the other day. The farmer wrote:

"'Dear Sir—I have had a nail in my thorax for 17 years. I am too busy to come to New York, but want you to come down here to Paris Corners with your rays, as my case will be worth your while. If you do not find time to come, send me a dozen rays boxed, by express, with instruction card, and I will try to work same myself.'

"The X-ray specialist wrote back to the farmer of Paris Corners:

"'Dear friend—I regret to say that business engagements prevent a trip to Paris Corners, and I am unfortunately out of rays just now. If you cannot come to New York, send me your thorax by parcel post, and we will see what can be done.'"

Sentiment and Service.

The psychologists are warning us against the danger of indulging in feelings that are not turned into action. Such wasted emotions harden the sensibilities and may wither the heart into dust, as in the case of the Russian lady who wept in the theater at fictitious suffering on the stage while cruelly insensible to her coachman who sat freezing to death as he waited for her outside. Prof. William James says that this is the danger that attends excessive novel reading and theater going and it is well to remember that it is the psychologist and not the preacher who raises his note of warning. "There is no more contemptible type of human character," he says, "than that of a nerveless sentimentalist or dreamer, who spends his life in a weltering sea of sensibility, but never does a concrete manly deed."

This danger attends church going and sermon hearing. We are greatly disposed to think that because we feel good in the church we are good. Nothing may be more deceptive: such feeling may be due to the comfortable seats and beautiful surroundings; or it may be the spell of the music; even the preaching, sometimes, makes us feel good. But whether we are good or not depends, not on how we feel in the church, but on what we are and what we do after we go out of the church. Are we any more patient and kind and courteous in the home, or are we as selfish and irritable and cross as ever? Are we the more honest and honorable in business, and do we keep ourselves the more unspotted from the world, and especially do we go out to cleanse the world with the spirit of Christ we have received and rebuild it into the kingdom of God? Simply feeling good may be no good at all. Some people enjoy pathetic feelings, even tears, and think they can substitute such sentimentalism for saintliness. But such goodness is good for nothing and will never be counted unto anybody for righteousness. It is only as we turn our feelings as streams of energy into service and transmute our tears into toil that we are followers of Christ and live and apply His gospel.

The war has stirred up feeling down to the deeps of the human heart and sent it rolling in great tides over the world. We have had our sense of the wickedness of war, especially of the wickedness that caused this war, terribly intensified, and our feelings of patriotism and of justice and liberty and of human brotherhood of the unity of the world have been deeply moved, as the sea is stirred up by a submarine upheaval. Such feelings are immense facts of the profoundest significance, but they are of real value only as they are turned as powerful streams upon the world to irrigate it with new life and to drive it to constructive action. Let not our satisfaction over the result of the war and over our part in the war evaporate in cheers, but inspire us in the great task of rebuilding the world.—*New Era Magazine*.

Exterminating Rats by Poison.

In exterminating rats, either by poisoning or by trapping, it is important to bear in mind that success depends largely on the degree to which the removal of other foods makes the poisoned bait or the bait in the traps attractive to the rat. A variety of poisons may be used, barium carbonate, phosphorus, arsenic, and others, but even with an efficient poison, failure often results through lack of attention to details.

HOW TO USE BARIUM CARBONATE.

1. *Kind of Bait.* Three or more kinds of bait should be used. Each must be mixed separately with barium carbonate. One kind of bait from each of the following classes should be used:

1. Meat or other animal substance, such as Hamburg steak, sausage, canned salmon, eggs or oysters.
2. Fresh fruit or vegetable food, such as cantaloupe, tomatoes, green corn, baked sweet potatoes, bananas, etc.
3. Miscellaneous foods, milk or cheese, peanut butter, bread, cake, cereals (raw or cooked).

2. *How to Mix.* The barium carbonate must be thoroughly mixed with the bait, so that the rats cannot eat the smallest portion of the bait without getting some of the barium carbonate. In the case of such substances as Hamburg steak, cheese, etc., use one part of barium carbonate to four parts of bait. Mix thoroughly with a spoon.

Substances which cannot be thoroughly mixed with the barium carbonate as just described (for example, cantaloupe, tomatoes, etc.) should be cut into small pieces and thoroughly covered with the barium carbonate, and then worked in with a knife.

3. *How to Set Poison.* The three kinds of bait, prepared as above, should be divided into small portions, about a teaspoonful each, and placed freely about premises, alternating baits 1, 2, 3. It should be set at short intervals, not over ten or fifteen feet. *Do not mix the different kinds of bait with each other.*

4. *General Instructions.* The morning after baiting, look for dead rats and remove them. Take up baits. Examine these so as to see which have attracted most rats. If any kind of bait has not been touched, use a different bait instead of this. Fresh bait should be used each night.

5. *How Often to Bait.* Bait every night, as long as rats continue to eat bait.

6. *Caution.* Keep fowls, dogs, cats, etc., away from bait.

Antidote. An emetic, followed by Rochelle or Epsom salts.

An Essay on Geese.

The following composition on geese was written, according to *Capper's Weekly*, by a schoolboy in St. Louis:

"Geese is a heavy-set bird with a head on one side and a tail on the other. His feet set so far back on his running gear that they nearly miss his body. Some geese is ganders and has a curl in his tail. Ganders don't lay or set. They just eat, loaf and go swimming. If I had to be a geese I would rather be a gander. Geese do not give milk, but give eggs, but for me give me liberty or give me death."

THE QUITTER.

You're sick of the game? Well, now, that's a shame,
You're young and you're brave and you're bright.
You've had a raw deal? I know, but don't squeal,
Buck up, do your darnedest, and fight.
It's the plugging away that will win you the day,
So don't be a piker, old pard!

Just draw on your grit; it so easy to quit;
It's keeping your chin up that's hard.

It's easy to cry that you're beaten—and die;
It's easy to crawfish and crawl;
But to fight, and to fight when hope's out of sight,
Why that's the best game of them all!
And though you come out of each gruelling bout,
All broken, and beaten, and scarred,
Just have one more try—it's dead easy to die,
It's keeping-on-living that's hard.

—*Robert W. Service.*

BULLETIN

OF THE

Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan

S. J. CRUMBINE, M. D., Editor.

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TOPEKA, KAN.

January, 1920

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INFLUENZA NOTICE!

The following pamphlets are available to any citizen of Kansas upon request:

- 1 Special Bulletin on Influenza.
- 2 Instructions for Caring for Influenza.
- 3 Pneumonia—the Season's Danger.

Address:

STATE BOARD OF HEALTH, Topeka, Kan.

MORBIDITY REPORT FOR DECEMBER, 1919.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Influenza.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Polio-myelitis (epidemic).	Other Diseases (see Addenda).
THE STATE.	33	228	345	67	504	78	11	134	328	93	98	7	1	353
Allen, except.	0	0	1	0	11	0	0	0	0	0	2	0	0	0
Iola.	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Anderson.	0	0	0	0	2	0	0	2	0	0	1	0	0	0
Atchison, except.	0	0	1	0	0	0	0	0	2	0	0	0	0	0
Atchison city.	0	0	7	0	1	0	0	0	5	1	0	0	0	0
Barber.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barton, except.	0	0	2	0	11	0	0	0	0	0	0	0	0	0
Great Bend.	0	1	0	10	0	0	0	0	0	1	0	0	0	1
Bourbon, except.	0	0	0	0	0	0	0	0	4	0	1	0	0	0
Fort Scott.	1	0	0	0	0	1	3	0	1	0	0	0	0	1
Brown.	1	8	9	0	4	0	1	2	0	0	0	0	0	0
Butler, except.	1	4	3	0	6	0	0	0	1	1	1	0	0	0
Augusta.	1	6	0	0	2	1	0	1	0	0	3	0	0	4
El Dorado.	3	8	11	0	6	0	0	5	0	0	0	0	0	1
Chase.	0	0	0	0	0	0	0	2	3	0	0	0	0	0
Chautauqua.	0	0	2	0	0	0	0	2	3	0	0	0	0	0
Cherokee, except.	0	1	13	0	4	0	0	2	3	0	3	0	1	10
Galena.	8	0	0	0	0	0	0	0	0	0	0	1	0	0
Cheyenne.	0	1	1	0	13	0	0	8	0	0	0	0	0	0
Clark.	0	1	2	0	1	0	0	0	0	0	0	0	0	0
Clay.	0	4	5	1	15	3	0	0	2	0	0	0	0	0
Cloud, except.	0	7	1	0	0	0	0	0	4	0	0	0	0	0
Concordia.	0	0	6	0	1	0	0	0	4	0	0	0	0	4
Coffey.	0	0	1	0	5	1	0	0	0	0	0	0	0	0
Comanche.	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Cowley, except.	0	1	0	0	3	0	0	0	1	0	0	0	0	0
Arkansas City.	0	3	0	2	6	1	0	0	4	0	0	0	0	4
Winfield.	0	0	4	1	1	0	0	0	2	5	0	0	0	4
Crawford, except.	1	5	7	0	3	0	1	8	1	1	2	0	0	4
Pittsburg.	1	0	2	0	1	0	0	0	0	0	0	0	0	7
Decatur.	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Dickinson.	2	0	4	0	9	0	0	0	6	3	1	0	0	2
Doniphan.	1	2	1	5	5	3	0	0	5	1	1	0	0	2
Douglas, except.	0	2	3	0	2	0	0	0	8	2	1	0	0	1
Lawrence.	0	0	1	0	7	1	0	0	1	0	0	0	0	3
Edwards.	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Elk.	0	0	4	4	0	0	0	0	2	0	1	0	0	0
Ellis.	0	1	4	0	0	0	0	0	0	1	1	0	0	0
Ellsworth.	0	0	2	1	0	0	0	0	1	1	1	0	0	2
Finney.	0	0	0	3	1	1	0	3	0	1	0	0	0	2
Ford, except.	0	0	0	0	7	0	0	2	0	3	0	0	0	0
Dodge City.	0	0	0	0	31	1	1	2	5	0	1	0	0	4
Franklin, except.	0	0	0	0	1	0	0	0	2	0	0	0	0	0
Ottawa.	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Geary, except.	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Junction City.	0	0	7	0	3	0	0	0	6	0	0	0	0	0
Gove.	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Graham.	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Grant.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.	0	8	0	0	16	0	0	0	0	0	0	0	0	0
Greeley.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood.	0	0	2	3	0	3	0	5	0	0	5	0	0	2
Hamilton.	0	0	0	0	0	0	0	0	1	0	0	0	0	4
Harper.	0	0	0	5	18	1	0	0	9	0	0	0	0	0
Harvey, except.	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Newton.	0	1	3	0	2	0	0	0	2	0	0	0	0	1
Haskell.	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Hodgeman*.	1	1	1	8	1	0	0	3	16	0	0	0	0	4
Jackson.	0	0	2	0	3	0	0	0	1	0	1	0	0	1
Jefferson.	0	7	9	0	2	0	0	37	4	0	1	0	0	2
Jewell.	0	0	4	0	0	9	0	0	4	0	0	0	0	0
Johnson.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kearny.	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Kingman.	0	2	9	1	4	0	0	0	3	7	0	1	0	1
Kiowa.	0	0	0	0	4	0	0	0	0	0	2	0	0	2
Labette, except.	0	0	0	1	1	0	0	0	1	0	1	0	0	1
Parsons.	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Lane.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except.	0	0	0	0	1	0	1	1	0	0	0	0	0	1
Leavenworth city.	0	0	2	3	4	1	0	0	11	0	1	0	0	10

MORBIDITY REPORT FOR DECEMBER, 1919—Concluded.

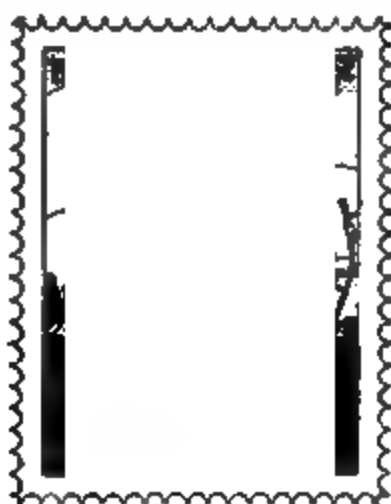
COUNTIES AND CITIES.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenspox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Polio-myelitis (epidemic)	Other Diseases (see Addenda)
Lincoln	0	3	3	2	13	2	1	0	2	1	0	0	0	0
Linn	0	0	4	0	4	10	0	0	0	0	4	0	0	0
Logan	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lyon, except Emporia	1	0	0	0	2	0	0	1	0	0	0	2	0	0
Marion	0	0	9	1	2	0	0	4	23	2	1	0	0	0
Marshall	2	2	6	3	0	1	0	0	10	0	1	0	0	0
McPherson	0	0	2	3	0	0	0	0	4	0	0	0	0	0
Meade	2	0	0	0	3	0	0	0	0	0	0	0	0	0
Miami	1	0	0	0	0	0	0	0	0	0	2	0	0	0
Mitchell	0	0	0	0	2	0	0	0	2	0	0	0	0	0
Montgomery, except Coffeyville	0	1	3	0	0	1	0	0	0	1	7	0	0	0
Independence	2	0	10	0	11	0	0	0	0	0	2	0	0	0
Morris	1	1	12	0	4	1	0	1	2	0	1	0	0	1
Morton	0	1	7	0	27	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	0	11	0	0	0	0	0	1	0	0	0
Neosho, except Chanute	0	6	1	0	7	0	0	0	0	0	0	0	0	0
Ness*	0	2	0	0	9	0	0	0	0	0	0	0	0	0
Norton	0	25	0	0	1	0	0	0	0	0	0	0	0	0
Osage	0	3	0	0	2	0	0	0	0	0	0	0	0	0
Osborne	0	0	0	0	0	0	0	0	1	11	0	0	0	0
Ottawa	0	21	2	0	9	7	0	0	1	0	0	0	0	0
Pawnee	0	0	1	0	4	2	0	0	12	0	1	0	0	0
Phillips	0	19	0	0	0	0	0	1	0	0	0	0	0	0
Pottawatomie	0	0	0	0	4	0	0	0	7	0	0	0	0	0
Pratt	0	1	0	0	11	3	0	0	14	0	0	0	0	0
Rawlins	0	3	0	0	0	0	0	0	0	0	1	0	0	0
Reno, except Hutchinson	0	0	5	0	12	0	0	0	0	0	0	0	0	0
Republic	0	0	4	0	10	1	0	0	13	0	1	0	0	10
Rice	0	1	0	0	0	0	0	0	3	0	0	0	0	1
Riley, except Manhattan	0	1	0	0	4	0	0	2	5	18	0	0	0	2
Rooks	0	2	0	0	4	1	1	2	6	1	0	0	0	1
Rush	0	0	0	0	0	0	0	0	2	0	1	0	0	0
Russell	0	0	2	0	0	1	0	0	4	0	0	0	0	1
Saline, except Salina	0	0	0	0	2	0	0	0	1	0	0	0	0	0
Scott	0	1	23	0	4	0	0	0	7	0	1	0	0	1
Sedgwick, except Wichita	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Seward	0	5	34	1	17	2	0	6	20	11	4	0	0	40
Shawnee, except Topeka	0	0	0	0	2	0	0	1	0	0	0	0	0	0
Sheridan	0	0	19	5	1	7	0	12	15	5	2	1	0	28
Sherman	0	1	0	0	0	0	0	7	0	0	0	0	0	0
Smith	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Stafford	0	32	0	0	1	0	0	0	1	0	0	0	0	0
Stanton	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sumner, except Wellington	0	1	11	0	6	0	1	2	6	2	1	0	0	1
Thomas	0	1	3	0	12	0	0	0	13	0	1	0	0	4
Trego	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Wabaunsee	0	1	1	0	5	0	0	0	0	0	0	0	0	0
Wallace*	0	2	0	0	3	1	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	4	0	0	0	0	0
Wichita	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wilson	1	0	3	1	1	0	0	0	0	1	0	0	0	0
Woodson	0	0	0	0	3	0	0	0	1	0	0	0	0	0
Wyandotte, except Kansas City	0	0	1	0	2	0	0	0	0	1	0	0	0	0
Rosedale	1	0	28	1	9	7	1	10	13	3	22	1	0	36
	0	0	0	0	0	0	0	0	0	0	0	0	0	32

* No report.

Other communicable diseases: Cancer, 9; chancroid, 3; erysipelas, 4; gonorrhoea, 180; pellagra, 1; sleeping sickness, 1; tonsillitis, 3; syphilis, 147; trachoma, 5.

Public Health Nursing.

No other public-health movement of modern times has made such rapid strides forward and upward as the public-health nursing movement. No work has been productive of such immediate results in mitigating human suffering among the poor and the prevention of sickness and premature death as has this movement. Such results assure appreciation of the public and permanence of position as a necessary part of modern public-health work and so far this appreciation of the services of the public-health nurse has been expressed in an unprecedented demand for schools, municipalities, counties, communities, states and large industrial corporations, but it has been impossible to supply the trained workers. During the influenza epidemic of 1918 and 1919, and



again during the influenza epidemic that is now making such rapid progress throughout the country, the need for the public-health work is doubly accentuated.

The time is come when every county and every municipality of the first and second class should have one or more thoroughly trained and competent public-health nurses as an integral and permanent part of their health organization. Probably fifty trained public-health nurses could be placed in Kansas at the time of writing this article, but they are not available.

The national organization of public-health nursing is encouraging the graduate nurses to take up the work of public-health nurses and offering inducements for training courses to that end. Graduate nurses who are interested in thus preparing themselves should address the State Supervisor of Public Health Nursing, care State Board of Health, Topeka, Kan.

Influenza Masks.

The following directions will be a guide for making an efficient influenza mask. Nurses and others who are exposed to influenza or its complication, pneumonia, should wear such masks.

1. From gauze 36 inches wide, cut 26 inches on the selvage.

2. Divide into two strips 18 inches wide.
3. Fold each strip into halves, making strip 9 by 26 inches, bring each end to the center, then over again, making mask eight thicknesses of gauze.
4. Turn in raw edges and stitch all four sides to hold firm. (Selvage need not be turned in. Can be stitched on the sewing machine or by hand.) Mask now measures 5 by 8 inches.
5. Put three pleats on 5-inch end, lower pleat deeper than the other two, to allow room for chin.
6. Attach a tape 12 inches long to each of the four corners. (Tape may be $\frac{1}{4}$, $\frac{1}{2}$ or $\frac{5}{8}$ inch wide.)
7. Place a cross made of heavy black thread in center of mask to designate the inside.

"Bite the Knot."

Last year's experience in the influenza epidemic proved that masks were effective if made correctly and used properly. Therefore, the following rules are necessary:

1. Masks should be of eight thicknesses of gauze.
2. The side with the knot *always* worn next to the mouth.
3. Masks should be boiled and sterilized every twelve hours.
4. Masks should always be worn when person is exposed to contagion. Never worn when out of doors.

Epidemic Influenza.

Influenza within the past week is looming up with threatening force on the health horizon of Kansas.

It is yet too early to forecast what proportions the outbreak may assume; but there is every good reason for not getting alarmed. So, too, there are good reasons why the people of Kansas should begin now to put up their defenses against what seems to be an impending attack of this dreaded disease. In other words, influenza is an enemy "now in our midst," and every citizen should prepare to meet it.

Influenza is a communicable disease. The infectious material comes from the mouth, nose and throat, being contained in the discharges from these parts of the body.

The infection is spread mainly by careless coughing, sneezing and spitting; and by human hands contaminated with infectious matter, due to the habit most every one has of bringing the hands in almost constant contact with the nose and mouth.

To lessen the chances of "catching" influenza, the following should be observed:

Keep your hands clean.

Don't shake hands—salute or bow.

Keep your handkerchief handy and use it to cover your mouth and nose whenever you have to cough or sneeze.

Spend your evenings at home, rather than at an overcrowded or overheated place of public assembly.

Keep yourself warmly clad; avoid violent exercise, chills and cold drafts.

Get all the fresh air and sunlight you can, both in your work place and in your home.

Keep your feet dry and warm.

Walk to your work, if not to far. The air in the street is better than you'll get in the overcrowded, ill-smelling street cars.

Finally, if in spite of observing all these precautions, you begin to feel "rocky," call your doctor and stay at home until he says you are all right and ready for work again.

Cleanliness of person and surroundings, strictly observed, will help a lot in keeping the "flu" away.

If you don't want the "flu" keep regular hours, get plenty of sleep and avoid crowded and overheated places of assembly.

Be calm.

A Chart of Conduct.

A prominent merchant of New York City carried these rules of conduct in his pocketbook, accompanied by a memorandum to this effect: "Read these rules at least once a week."

Never be idle.

Make few promises.

Always speak the truth.

Never speak ill of any one.

Keep good company or none.

Live up to your engagements.

Be just before you are generous.

Earn money before you spend it.

Drink no kind of intoxicating drinks.

Good character is above all things else.

Keep your own secrets if you have any.

Never borrow if you can possibly avoid it.

Never play at any kind of games of chance.

Keep your promises if you would be happy.

Make no haste to be rich, if you would prosper.

When you speak to a person, look him in the face.

Save when you are young, to spend when you are old.

Never run in debt unless you see a way to get out again.

Avoid temptation, through fear you may not withstand it.

Ever live (misfortune excepted) within your income.

Small and steady gains give competency with tranquility of mind.

Good company and good conversation are the sinews of virtue.

Your character cannot be essentially injured except by yourself.

If any one speaks evil of you, let your life be so that none will believe him.

If your hands cannot be usefully employed, attend to the cultivation of your mind.

Quite Well.

When John Quincy Adams was eighty years of age he met in the streets of Boston one day an old friend who shook the venerable statesman's hand and said: "Good morning, and how is John Quincy Adams to-day?"

"Thank you," was the ex-president's answer, "John Quincy Adams himself is well, sir; quite well, I thank you. But the house in which he lives at present is becoming dilapidated. It is tottering upon its foundation. Time and the seasons have nearly destroyed it. Its roof is pretty well worn out, its walls are much shattered and it trembles with every wind. The old tenement is becoming almost uninhabitable and I think John Quincy Adams will have to move out of it soon. But he himself is quite well, sir; quite well."

With that the venerable sixth president of the United States moved on with the aid of his staff.

The Cycle of Tuberculosis.

The sum up of the cycle of tuberculosis may be as follows:

1. Tuberculosis begins in a majority of instances during the infancy or childhood of the victim, the infection probably being transmitted by an adult with open tuberculosis. The bacilli take root in the young body and become active or, more frequently, remain in a dormant state.

2. Activity or dormancy depend upon the amount of organisms which enter the body, their virulence, whether or not reinfection occurs, and the child's susceptibility to the disease.

3. If the bacilli are malignant or present in large numbers, or the infection is repeated, the child succumbs to the generalized form of the disease.

4. Ninety-five to one hundred per cent of infants up to two years of age, having the active form of tuberculosis, die. Those infected who survive the first year can hardly survive to the twentieth year.

5. The disease in early life generally attacks the glands, joints, membranes, bones, and skin. These all act as outer defenses to the lungs.

6. Nearly every one is at some time infected with tuberculosis, and the latent conditions become active when the fixed laws of hygienic life are violated. Better than hospitals for cure is conformity to the laws of well being.

7. Infants and young children must be kept healthy and guarded from infection in order that the burdens and strains of youth, of early adult and middle life, may not result in submission to the disease.

It is pitiable to see robust men learn the lesson of health culture at a period too late to do them much good. When the crash comes it is too late to save the tobacco-poisoned, nerve-racked, high-speed body-machine. But with care, some can still rattle around on low gear, and even that is some fun.

Economy.

As a people, we have not yet learned to economize. One of the virtues we Americans most need is thrift. It is a mere truism to say that luxury and extravagance are not good for a nation. So far as they affect character, the loss they cause may be beyond computation. But in the material sense there is a loss greater than is caused by both extravagance and luxury put together. I mean the needless, useless and excessive loss to our people from premature death and avoidable diseases. Wholly apart from the grief, the suffering, and the wretchedness which they cause, the national loss each year has been calculated as nearly twice what it costs to run the federal government. In addition to the state and city health officers and organizations, there is urgently needed a federal bureau of health, to act, so far as the national government properly may, to relieve our people from the dreadful burden.—*Theodore Roosevelt.*

A Schick Test Catechism.

What is the Schick test? A dose of diphtheria toxin is injected between the layers of the skin of the arm. If the person's blood contains antitoxin, nothing happens and the patient is declared immune. If, however, a distinct circumscribed area of redness appears at the site of the injection the test is declared positive, which means that the person does not have in his blood sufficient resistance against diphtheria and is liable to contract the disease.

What is meant by diphtheria toxin? This is the poison produced by the diphtheria germs, and is obtained by growing the bacteria in broth for a certain length of time, after which they are killed by carbolic acid.

What is meant by diphtheria antitoxin? This is a serum produced by inoculating the horse with diphtheria toxin. The animal's resisting power causes the antitoxin to be produced in the blood.

Is there any risk in the Schick test? Absolutely none. When the test is positive the redness which appears gradually disappears on the third or fourth day.

What is the idea of having the test made? Diphtheria is a very serious disease. About one out of every eight cases is fatal. The infection exists in this state throughout the year, and children between the ages of two and ten are most susceptible. Every father and mother wants to know whether their children are liable to catch this disease, and if so, how it can be avoided. The Schick test determines this. There is a serum called toxin-antitoxin which, when injected, confers immunity to those who react positively to the Schick test.

When should the test be made? All children over the age of six months should have this test made. Nursing infants seem to have a natural immunity to the disease, because of protective substances in mother's milk.

What is a negative test? If no redness of the skin develops after the Schick test, it means that the blood contains sufficient resisting power to diphtheria. Persons having a negative test and exposed to diphtheria do not develop the disease.

Are adults immune to diphtheria? After the age of ten the occurrence of diphtheria gradually lessens. Few adults contract this infection and grown persons are relatively immune to the disease. Statistics show 70 per cent of positive reactions to the Schick test in children, and 15 per cent positive in adults.

Is there no intermediate reaction between positive and negative? Yes. The reaction may be strongly positive, positive, moderately positive, and faintly positive, depending upon the degree of the redness of the skin.

If the test is positive, what is done to prevent diphtheria? A serum which is a combination of toxin and antitoxin is administered under the skin at three sittings, seven days apart.

Does the toxin-antitoxin serum cause any harm? No. Local and constitutional symptoms are noted in 20 to 50 per cent of cases. These are redness, slight swelling and tenderness of the arm, and a slight rise in temperature. The symptoms, if any, disappear within forty-eight hours.

How long does this acquired immunity last after the toxin-antitoxin administration? In 95 per cent of cases previously susceptible, the protection against diphtheria lasts for years, possibly for life. To make sure of the duration of immunity the Schick test can be made regularly every year.

What is the practical value of the Schick test? In every school, institution, hospital or home where large numbers of children are quartered, diphtheria may break out at any time. By testing every child on admission, one can determine which children are susceptible to the disease. Those who react positively are given the toxin-antitoxin treatment. In this way, diphtheria may be eradicated. If diphtheria breaks out in your home, antitoxin is given to those who react positively to the Schick test. In this way persons immune to the disease avoid the inconvenience of having the serum injected.—*Philadelphia Health Bulletin*.

In These Days of High Prices.

What is the average man? You might say he weighed 150 pounds, that he had five fingers and five toes. But is that interesting? State that this average man of 150 pounds contains the constituents found in 1,200 eggs. He has enough iron to make four ten-penny nails. His fat contents would make seventy-five candles and a good-sized cake of soap. His phosphate contents would make 8,064 boxes of matches. There is enough hydrogen in him in combination to fill a balloon and carry him above the clouds. The remaining constituents would yield, if utilized, six teaspoonfuls of salt, a bowl of sugar and ten gallons of water.—*Clin-ton P. Anderson*.

Who Am I?

I am a far too common sight in the neighborhood of every high school.

I am small and innocent in appearance, but contain immense possibilities for working mischief.

I ruin many a football team. No coach will permit his players to use me during the season, for I am sure death to wind, speed and "pep."

I am responsible for innumerable failures in school, and for still more in after life.

I can destroy a boy's ambition and will power, and put his brain to sleep.

At my best, I am a worthless thing to spend good money for. At my worst, I injure body and mind.

The evil I do is incalculable. Still I flourish.

I am the student's worst enemy.

I am the cigarette.—*John Elson, Cornell University.*

Food Analysis LXVII.

E. H. S. BAILEY, Director Food Laboratory; W. S. LONG, Chemist in Charge.

January 1, 1920.

BEVERAGES.

60783. "Lemon Sour Pop." Salina Bottling Works, Salina. Retailer, Salina Bottling Works, Salina. Passed.
 60784. "Lemon Soda." Salina Bottling Works, Salina. Retailer, Salina Bottling Works, Salina. Passed.
 60785. "Cherry Punch." Salina Bottling Works, Salina. Retailer, Salina Bottling Works, Salina. Passed.
 60786. "Lemon Sour." Salina Bottling Works, Salina. Retailer, Salina Bottling Works, Salina. Passed.
 60787. "Cherry Pop." Salina Bottling Works, Salina. Retailer, Salina Bottling Works, Salina. Passed.
 93312. "Ginger Ale." Larned Bottling Works, Larned. Retailer, Larned Bottling Works, Larned. Passed.
 93313. "Lemon Soda." Larned Bottling Works, Larned. Retailer, Larned Bottling Works, Larned. Passed.
 93314. "Concord Grape." Larned Bottling Works, Larned. Retailer, Larned Bottling Works, Larned. Passed.

MISCELLANEOUS.

22765. Cooking Compound. Comac Co., Minneapolis, Minn. Retailer, H. Baden, Independence, Mo. Mostly starchy material. See 72025.
 22766. Cooking Oil. N. K. Fairbanks & Co., New Orleans, La. Retailer, Unclaimed Santa Fe freight. Passed.
 22771. Milk. Illegal.
 22774. Pecans. William Green & Son, Topeka. Passed.
 22776. Pecans. Gem Grocery Co., Topeka. Passed.
 50249. English Walnuts. Poehler Mercantile Co., Emporia. Retailer, Abilene Mercantile Co., Abilene. Passed.
 50250. English Walnuts. Ridenour-Baker Grocery Co., Kansas City, Mo. Retailer, Kansas Cash Store, Abilene. Passed.
 50251. Pecans. Western Merchandise Co., Abilene. Retailer, R. H. Viola, Abilene. Passed.
 60738. Tomatoes. H. D. Lee Mercantile Co., Kansas City, Mo. Retailer, Harvey & Harvey, Emporia. Passed.
 60739. Tomatoes. H. D. Lee Mercantile Co., Kansas City, Mo. Retailer, Harvey & Harvey, Emporia. Passed.
 60740. Tomatoes. Kurer Pickle Co., Brighton, Colo. Retailer, Harvey & Harvey, Emporia. Passed.
 60741. Tomatoes. Luana Canning Co., Los Angeles, Cal. Retailer, Consumers Store, Emporia. Passed.
 60742. Tomatoes. H. J. M. McGrath Co., Baltimore, Mo. Retailer, Consumers Store, Emporia. Passed.

60743. Tomatoes. C. S. Ralph & Bros., Vienna, Md. Retailer, Consumers Store, Emporia. Passed.
 60744. Tomatoes. The Theo. Poehler Mercantile Co., Emporia. Retailer, Consumers Store, Emporia. Passed.
 60745. Tomatoes. J. Sangrall & Bros., Baltimore, Md. Retailer, Consumers Store, Emporia. Passed.
 60746. Tomatoes. McCord-Kistler Mercantile Co., Topeka. Retailer, Consumers Store, Emporia. Passed.
 60747. Tomatoes. J. Cleveland & White, Salisbury, Md. Retailer, Consumers Store, Emporia.
 72059. Lemon Juice. Passed.
 72062. Grape Fruit. Whitaker Bros., Topeka. Retailer, Union Coöperative, Mannville. Passed.
 98295½. Lemon Flavoring. Coconos Chemical Co., St. Louis, Mo. Retailer, Hall Mercantile Co., Minneola. A solution of lemon oil in vegetable oil.
 98315. "Ceco." Ceco Syrup Co., Tulsa, Okla. Retailer, Larned Bottling Works, Larned. Benzoic acid or benzoate present.

UNOFFICIAL SAMPLES.

1229. "Vinegar Bees." A culture of yeasts and bacteria.
 1230. Apple Butter. Retailer, Mitchell & O'Donnells, Paola. Grit present in form of fine sand.
 1231. Apple Cider. L. E. Quinlan, Lyons. Alcohol, 4.08 per cent.
 1232. Apple Cider. L. E. Quinlan, Lyons. Alcohol, 5.55 per cent.
 1234. Milk. Office sample. Fat, 3.2 per cent.
 1235. Cream. Office sample. Fat, 23 per cent.
 1236. Cheese. Office sample. Appears old and rancid. Illegal.
 1238. Sugar. Dow Moore, Galeno. Passed.

If—

If you have food for your stomach, clothes for your body and daylight to work in—

If you have shelter for your head—

If you have sunshine in your heart and a smile on your face—

If you have the love of your friends and friends to love—

If you have the respect of your neighbors—

If you have eager muscles and the desire to do something—

If you think of others and thus make others think of you—

If you are thoughtful of the weak and opposed to the unjust—

If you are cheerful, honest and conscientious—

If you have never injured a human being in all your life—

If you have steady habits, a steady nerve and a steady girl—

You ARE WELL OFF!—Cannery Notes.

Report of Division of Water and Sewage.

DECEMBER, 1919.

CHAS. A. HASKINS, Chief.

I.

PERMITS ISSUED OR REFUSED FOR WATER WORKS AND SEWERAGE.

(Permits are issued after application is approved by engineer following his investigation of local conditions and examination of plans and specifications for the proposed work, under the authority of the regulations adopted under the provisions of chapter 382, Laws of 1907, as amended by chapter 226, Laws of 1909.)

Place, Date, and Nature of Improvement.

Stockton. 12-17-19. Sewer for waterworks plant.

Ashland. 12-17-19. Sewer system and sewage-disposal plant.

Solomon. 12-12-19. Waterworks plant.

Who Am I?

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I am the cigarette.—*John Elson, Cornell University.*

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If—

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 If you have the respect of your neighbors—
 If you have eager muscles and the desire to do something—
 If you think of others and thus make others think of you—
 If you are thoughtful of the weak and opposed to the unjust—
 If you are cheerful, honest and conscientious—
 If you have never injured a human being in all your life—
 If you have steady habits, a steady nerve and a steady girl—
 You ARE WELL OFF!—Cannery Notes.

ater and Sewage.

1919.

), Chief.

ATER WORKS AND SEWERAGE.

ved by engineer following his investiga
 ns and specifications for the proposed
 ed under the provisions of chapter 382,
 of 1909.)

rks plant.

ewage-disposal plant.

1919—A Record Health Year.

The year 1919, despite its very unpromising beginning, closed with better health conditions than have prevailed during any year on record. Between January and March, the United States and Canada were still feeling the effects of the wave of influenza. Many cities were having their worst attacks in those months. The outlook generally was gloomy. Based upon what happened after the epidemic of 1889, health officers expected a return of the influenza during the course of the year and a high death rate from diseases of the heart and kidneys. The country was full of persons who had been left weakened as the result of the influenza, and many of these were expected to die and thus increase the death rate. But the expected did not happen; beginning with the month of April and continuing for each month thereafter up to the end of the year, mortality rates fell sharply below the average of the preceding years. The death rate of the summer of 1919 was unusually low, and the extraordinarily favorable record continued throughout the autumn. In fact, the death rates for the last quarter of the year, instead of showing the marked increases usual for the early winter, were as low as some of the best summer and autumn rates on record. From the health standpoint, the year 1919 has been one full of agreeable surprises.

These conditions prevailed in the general population, and also among the twelve million policyholders of the Metropolitan Life Insurance Company. An investigation of the records for policyholders of this company shows an unusually low prevalence of such diseases as tuberculosis, typhoid fever, measles, whooping cough, diseases of the heart and kidneys, diarrheal complaints, and of accidents. During the last quarter of the year, there has been an increase in the death rates from scarlet fever and from diphtheria; but these were not of sufficient importance to influence the total death rates. A very remarkable feature of the insurance experience has been the marked improvement in the mortality among negroes.

A few preliminary figures are presented herewith in support of the above statement: The 186,000 claims paid on premium-paying business in the Industrial Department during the year represent approximately 131,000 deaths. The total death rate per 1,000 policyholders declined from 15.5 in 1918 to 10.4 in 1919, a reduction of 33 per cent. Compared with 1911, the 1919 rate shows a reduction of 17 per cent. Tuberculosis of the lungs during the year just closed was 33 per cent lower than in 1911. Typhoid fever shows a decline of 69 per cent in the rate since 1911. The four important diseases of childhood—measles, scarlet fever, whooping cough and diphtheria—together show a decline of 49 per cent in eight years. All of these are remarkable figures and bear testimony to the beneficial effect of the public health work which has been carried on in American communities during recent years. Continued improvement similar to that shown during the last half of 1919 will, in a few years, make good the lives that were lost in the great epidemic of 1918.—*Statistical Bulletin, Metropolitan Life Insurance Company.*

Summary of Report of the Division of Venereal Diseases Activities.

The following is a summary of the activities of the division of venereal diseases of the State Board of Health in Kansas from July 1, 1918, to December 30, 1919.

The total number of cases of venereal diseases reported to the State Board of Health by physicians since July 1, 1918, is as follows: Gonorrhea, 3,311; syphilis, 1,405; chancroid, 54.

The treatment has been provided through five clinics, the first having been established December 1, 1918, and the last in November, 1919. During this time there have been treated in these clinics: Gonorrhea, 537; syphilis, 745; chancroid, 24.

These clinics are located at Wichita, El Dorado, Topeka, Lawrence and Rosedale. Kansas City, Kan., expects to have a clinic in operation about February 1. During the year there has been distributed for treatment at the clinic and to physicians for the treatment of indigent patients 4,178 doses of arsphenamine (or "606"), which has cost \$3,630.

There has been maintained at Rosedale in connection with the University Medical School a public-health laboratory, which has furnished free Wassermann examinations to all physicians in the state, as well as to the clinics. This laboratory has averaged 500 Wassermanns per month since its establishment January 1, 1919.

Upon the organization of this division as a part of the State Board of Health there was also established a quarantine camp for women at Lansing, Kan., where the type of individual it was necessary to place in quarantine could be cared for and receive proper treatment. This camp was established primarily to handle the cases that were a menace to military camps, but it soon became evident that if progress was to be made in the work a similar camp was necessary for men. During the year 1918 there were 21 men and 340 women placed in quarantine. During the year 1919 there have been 157 men and 258 women quarantined.

The educational campaign has consisted of public lectures, showings of moving-picture films, card exhibits, slides, and the distribution of literature. The state has had printed 230,000 pamphlets, and purchased 33,000; 25,000 people have been reached by the films and card exhibits.

This work has been made possible in Kansas through the Chamberlain-Kahn funds that were appropriated by the Federal government for the protection of soldiers. It is no longer a problem for the military authorities but one which every city and community will have to handle for itself, and the recent session of the legislature has made this possible by providing appropriations for the continuance of the work the coming year.

Another Year.

Within life's book another leaf is turned;
To-day we face a new and untried year,
Its secrets and its purposes all unguessed.
No hand may lift the veil that hides from us
Success or failure, and no feet save ours
 May tread our pathway, do our several tasks.

We step into the New Year's outstretched arms,
And wonder if with all her luring charms
Truer she'll prove than one we leave behind.
What we have gained from wrestling with defeat,
Mayhap will give us strength new foes to meet
With greater courage. Come, then, storm and stress,
Defeat and failure, or joy's magic spell,
To each or all the new year holds in store
We reach our hands in welcome, for we know
Our truest blessings from our failures grow.
And that our share of happiness will be
 What we acquire through self-mastery.

—*Helen M. Richardson.*

BULLETIN
OF THE
Kansas State Board of Health.

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

Entered as second-class matter, March 5, 1905, at the post office at Topeka, Kan.,
under the act of Congress of July 16, 1894.

No. II.

FEBRUARY, 1920.

VOL. XVI.

**THE KANSAS WOMEN'S COMMITTEE ON
CHILD WELFARE.**

**A New Variety of the Kansas State Flower Which is Blooming this
Spring. It is Called "The Invincible." It is a Plant of Prolific
Growth, a Free Bloomer and Hardy in All Climates.**

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MORBIDITY REPORT FOR JANUARY, 1920.

COUNTIES AND CITIES.	Other Diseases (see Addenda).	Polio-myelitis (epidemic)....	Meningitis (epidemic)....	Pneumonia (acute lobar)...	Mumps.....	Chicken-pox.....	Whooping Cough.....	German Measles (rubeola).....	Measles (morbilli).....	Scarlet Fever....	Influenza.....	Diphtheria.....	Smallpox.....	Typhoid and Paratyphoid..
THE STATE.....	358	3	9	284	218	428	200	1	297	543	9037	211	392	40
Allen, except.....	0	0	0	0	0	0	0	0	0	13	21	0	0	0
Iola.....	0	0	1	2	0	2	1	0	0	0	0	0	0	0
Anderson.....	0	0	0	0	0	0	0	0	0	0	203	0	1	0
Atchison, except.....	1	0	0	7	0	0	2	0	0	0	20	0	0	0
Atchison city.....	0	0	0	0	0	4	2	0	0	6	119	0	2	0
Barber.....	0	0	0	0	0	0	0	0	0	0	30	8	0	0
Barton, except.....	0	0	0	6	7	0	0	0	0	7	58	0	3	0
Great Bend.....	0	0	0	1	0	0	0	0	0	2	0	0	0	0
Bourbon, except.....	0	1	1	4	0	1	0	0	0	5	33	1	0	0
Fort Scott.....	0	0	0	2	1	2	0	0	0	1	15	2	1	0
Brown.....	0	0	0	2	1	0	0	0	2	15	77	0	9	0
Butler, except.....	0	0	0	7	0	4	6	0	9	10	50	3	6	0
Augusta.....	0	0	0	0	0	1	0	0	1	1	0	1	1	0
El Dorado.....	0	0	0	10	2	4	2	0	1	3	0	4	20	0
Cherokee.....	1	0	0	0	13	2	11	0	0	1	71	0	2	0
Chautauqua.....	0	0	0	1	1	4	12	0	0	2	13	3	6	0
Cherokee, except.....	13	0	0	0	0	12	0	0	4	7	26	9	1	1
Galena.....	11	0	0	0	0	1	0	0	0	1	0	0	0	2
Cheyenne.....	0	0	0	0	1	3	0	0	5	0	109	0	2	1
Clark.....	0	0	0	0	0	0	0	0	0	1	165	0	0	0
Clay.....	0	0	0	1	0	2	0	0	3	10	89	0	0	0
Cloud, except.....	0	0	0	0	0	6	0	0	0	6	151	1	6	0
Concordia.....	0	0	0	2	0	5	1	0	1	2	0	2	1	0
Coffey.....	0	0	0	1	0	2	0	0	2	7	0	0	0	0
Comanche.....	0	0	0	3	0	0	0	0	0	0	8	0	0	0
Cowley, except.....	0	0	0	2	0	0	2	0	1	2	202	0	1	0
Arkansas City.....	0	0	0	4	1	11	0	0	3	5	0	0	2	0
Winfield.....	0	0	0	1	7	1	0	0	0	0	0	1	0	0
Crawford, except.....	0	0	0	9	2	2	2	0	0	5	63	4	3	0
Pittsburg.....	0	0	0	0	0	4	0	0	1	4	91	0	3	0
Decatur.....	0	0	0	1	10	0	0	1	0	21	10	3	0	2
Dickinson.....	0	0	0	2	1	9	16	0	0	9	35	2	2	0
Doniphan.....	0	0	0	3	4	4	11	0	30	9	106	0	10	0
Douglas, except.....	0	0	1	0	1	0	0	0	1	2	22	0	8	0
Lawrence.....	13	0	0	5	4	9	0	0	0	2	76	0	1	0
Edwards.....	0	0	0	2	0	0	0	0	0	0	457	0	0	0
Elk.....	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Ellis.....	0	0	0	2	0	4	0	1	1	0	14	3	0	0
Ellsworth.....	0	0	0	2	6	0	1	5	5	5	92	2	0	0
Finney.....	0	0	0	2	0	5	0	0	1	1	47	0	17	0
Ford, except.....	0	0	0	4	3	1	1	0	0	12	313	0	0	0
Dodge City.....	0	0	0	5	0	2	0	0	0	4	0	2	0	0
Franklin, except.....	0	0	0	0	0	0	0	0	0	0	150	1	0	0
Ottawa.....	0	0	0	1	0	5	0	0	0	0	0	0	0	0
Geary, except.....	0	0	0	0	0	0	0	0	0	1	115	3	1	0
Junction City.....	0	0	0	2	1	16	0	0	0	5	0	4	0	2
Gove.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham.....	0	0	0	0	0	0	0	0	2	0	0	0	14	0
Grant.....	0	0	0	0	0	0	0	0	0	0	37	0	0	0
Gray.....	0	0	0	0	0	12	0	0	0	3	93	0	5	0
Greeley.....	0	0	0	1	0	1	0	0	1	0	7	0	0	0
Greenwood.....	0	0	0	6	4	0	1	0	32	0	43	0	0	0
Hamilton.....	0	0	0	0	0	0	0	0	1	0	29	0	0	0
Harper.....	0	0	0	1	10	0	7	0	0	11	50	0	0	0
Harvey, except.....	0	0	0	0	0	0	0	0	0	0	42	0	0	0
Newton.....	0	0	0	0	11	9	0	0	3	4	0	1	0	0
Haskell.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	0	0	0	0	0	0	0	0	2	96	0	0	0
Jackson.....	0	0	0	1	0	19	6	0	0	2	62	2	1	0
Jefferson.....	0	0	0	3	0	0	1	0	0	12	43	0	0	0
Jewell.....	0	0	0	0	0	6	28	0	1	4	373	0	43	0
Johnson.....	0	0	0	0	0	0	0	0	2	6	149	0	4	0
Kearny.....	0	0	0	0	7	0	0	0	0	1	5	0	0	0
Kingman.....	0	0	0	0	7	0	0	0	0	10	142	7	0	0
Kiowa.....	0	0	0	2	0	1	6	0	7	6	72	1	0	0
Labette, except.....	0	0	0	0	0	0	0	0	2	4	0	1	0	0
Parsons.....	0	0	0	0	0	3	0	0	4	2	36	1	1	0
Lane.....	0	0	0	0	0	0	0	0	0	0	15	0	0	0
Leavenworth, except.....	0	0	0	2	0	0	0	0	0	0	22	0	8	0
Leavenworth city.....	0	0	0	0	0	6	0	0	0	3	12	0	6	0

MORBIDITY REPORT FOR JANUARY, 1926—Concluded.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Bubonic.	Dysentery.	Indolence.	Scarlet Fever.	Measles (various).	Whooping Cough.	Cholera.	Mumps.	Pneumonia (acute lobes).	Membranitis (epidemic).	Poliomyelitis (epidemic).	Other Diseases (see Address).
Lincoln.....	0	0	0	46	10	0	0	4	0	0	0	0	0
Linn.....	0	0	0	2,3	1	0	10	0	0	0	0	0	0
Logan.....	0	0	0	17	0	0	2	0	0	0	0	0	0
Lyon, except Emporia.....	0	0	2	78	2	0	0	0	0	0	0	0	0
Marion.....	0	0	0	0	2	0	1	0	0	0	0	0	0
Marshall.....	0	10	0	100	2	0	0	0	0	0	0	0	0
McPherson.....	0	0	1	23	2	0	0	0	0	0	0	0	0
Meade.....	0	0	3	23	1	0	0	0	0	0	0	0	0
Miami.....	4	0	0	88	0	0	0	0	0	0	0	0	0
Mitchell.....	0	0	0	9	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeeville.....	3	0	2	18	1	0	0	2	0	0	0	0	0
Independence.....	0	0	11	0	1	0	0	2	0	0	0	0	0
Morris.....	1	0	1	0	10	0	0	1	0	0	0	0	0
Morton.....	0	1	0	66	3	0	0	0	0	0	0	0	0
Nemaha.....	0	0	1	67	4	0	1	4	1	0	0	1	0
Neosho, except Chanute.....	0	3	0	23	6	0	0	0	4	0	0	0	0
Nemaha.....	0	0	0	0	2	0	0	2	0	0	0	0	0
Norton.....	0	0	2	6	1	0	0	0	0	0	0	0	1
Osage.....	1	37	1	4	3	0	0	2	0	0	0	0	0
Osborne.....	0	0	3	73	4	0	0	0	0	0	0	0	0
Ottawa.....	0	0	0	55	2	0	0	0	2	0	0	0	0
Pawnee.....	0	4	0	84	29	0	0	0	3	0	0	0	0
Phillips.....	0	0	0	354	2	0	10	0	1	2	0	0	0
Pottawatomie.....	0	46	0	93	2	0	0	0	0	0	0	0	0
Pottawatomie.....	0	0	0	126	1	0	2	8	4	1	0	0	0
Pretz.....	1	0	0	83	19	0	0	16	0	0	0	0	0
Rawlins.....	0	9	0	79	0	0	0	1	0	0	0	0	0
Reno, except Hutchinson.....	0	0	0	42	30	0	0	0	0	0	0	0	0
Republic.....	0	0	1	14	8	0	0	11	1	2	0	0	0
Rice.....	3	0	0	271	0	0	0	2	0	0	0	0	0
Riley.....	1	0	0	63	6	0	0	9	36	2	0	0	2
Riley, except Manhattan.....	0	0	0	86	6	0	0	5	0	1	0	0	0
Rooks.....	0	2	0	0	4	0	21	30	2	1	0	0	9
Rush.....	0	7	0	6	1	0	0	0	0	0	0	0	0
Rush.....	0	1	0	100	0	0	0	4	2	0	0	0	0
Russell.....	0	0	0	0	1	0	0	0	0	0	0	0	0
Saline, except Salina.....	0	0	1	196	5	0	2	1	1	0	0	0	0
Saline.....	0	0	14	0	4	0	0	0	0	0	0	0	0
Scott.....	0	1	0	2	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita.....	0	0	1	35	5	0	0	0	0	2	0	0	0
Seward.....	1	21	10	167	10	0	2	32	21	11	2	0	74
Shawnee, except Topeka.....	0	2	0	26	1	0	0	1	0	7	0	0	0

Other communicable diseases: Anthrax, 1; cancer, 5; chancroid, 8; erysipelas, 11; gonorrhea, 182; Ophthalmia neonatorum, 3; syphilis, 149; trachoma, 4.

KANSAS WOMEN'S COMMITTEE ON CHILD WELFARE.

The Kansas Women's Committee on Child Welfare is an expression of the desire of the women of the state to work together in some big organic effort rather than in a multitude of isolated, unassociated projects.

The people of the state of Kansas were never so alive to the interests of the children of the state as they are at the present moment. Everybody wants to do something for Kansas children. If "everybody" can only get behind a plan which is organic, elastic and permanent, it should be possible to accomplish much during this reconstruction year. Social ideals are now fluid, but will rapidly set into the permanent mold of post-war habits and traditions. Now is the time to shape these ideals for the lasting benefit of children and society.

Plan.—This committee consists of one representative from each of the leading state women's organizations and also several individuals who represent special interests of children. The personnel of this committee as it stands at present is as follows:

State Federation of Women's Clubs, Mrs. Festus Foster, Topeka (chairman).
 State W. O. T. U., Mrs. Lillian Mitchner, Topeka.
 State Mothers' Congress and Parent-Teacher Association, Mrs. J. K. Coddington, Lansing.
 State Collegiate Alumnae, Mrs. Frank Chase, Topeka.
 State D. A. R., Mrs. D. V. Walker, Wichita.
 State Women Voters' League, Mrs. Catherine A. H. Hoffman, Enterprise.
 State Women's Bar Association, Mrs. Homer Foltz, Topeka.
 State P. E. O., Mrs. Alva Clapp, Pratt.
 State Public Health Nursing Association, Mrs. Virginia K. Kimble, Topeka.
 State Public Health Nurses, A. R. O., Miss Laura Neiswager, Topeka.
 State Kindergarten Association, Mrs. June Chapman, Topeka.
 Kansas Council of Women, Miss Effie Graham, Topeka.
 State Superintendent of Public Instruction, Miss Lorraine E. Wooster.
 Secretary State Industrial Welfare Commission, Miss Linna Bresette, Topeka.
 Woman Factory Inspector, Miss Alice McFarland, Topeka.
 Chief, Division of Child Hygiene, Kansas State Board of Health, Dr. Florence Brown Sherbon, Topeka (Secretary).
 Rural Extension, Home Economics, K. S. A. C., Mrs. Mary W. McFarlane, Manhattan.
 Rural Extension, Home Demonstration Agents, K. S. A. C., Miss Frances Brown, Manhattan.
 State Federation of Colored Women's Clubs, Mrs. Emma Gains.

DISTRICT CHAIRMEN.

First District, Mrs. W. P. Lambertson, Fairview.
 Second District, Mrs. Roy Tenney, Lawrence.
 Third District, Mrs. R. R. Bittman, Independence.
 Fourth District, Mrs. C. A. Brunner, Burns.
 Fifth District, Mrs. C. A. Kimball, Manhattan.
 Sixth District, Mrs. O. B. Walker, Norton.
 Seventh District, Mrs. Mamie Axline Fay, Pratt.
 Eighth District.

A number of conferences have been held and the following plan has grown out of these:

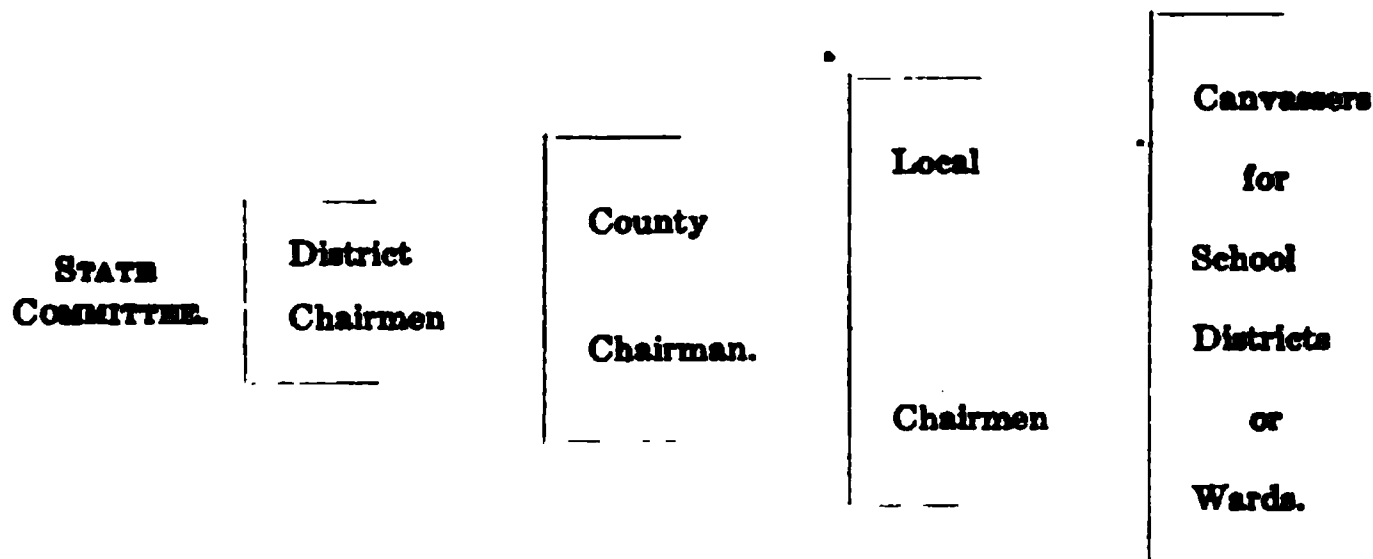
1. Minimum standards of child welfare, as formulated by the international conference on child welfare, a synopsis of which appears on the following pages, were adopted by the committee as a general working outline. It is the aim of the committee to reduce the interval to a minimum until we shall see these international standards written into the laws and the life of Kansas.

2. The Collegiate Alumnae of the state have taken, as their special contribution to the plan, the working out of club study programs covering the subject matter contained in the international minimum standards. This will enable the women of every community to become thoroughly informed concerning the meaning of the movement.

3. The Women's Bar Association are working out an index to Kansas laws relating to women and children.

4. The state committee has determined to make a statewide survey to discover the present conditions in Kansas with reference to the various interests of childhood as outlined in the international minimum standards. The more accurately conditions are known and understood, the more effectively they may be met.

The machinery for making this survey may be diagrammed as follows:



The work of collecting and tabulating information has been divided between the various chairmen and canvassers in such a manner that there is no duplication, and when the returns are all in every part of the state will have been covered. The accompanying questionnaires, tally sheets and instructions will show the scope and method of inquiry.

The scope of the survey, it will be seen, is limited to an attempt to uncover actual community condition with relation to (1) children in industry; (2) the health of mothers and children; (3) dependent, defective and delinquent children; (4) the general interests of children. The committee is endeavoring to keep the survey strictly impersonal. Facts, not names, are sought. Therefore no names or personal data are to appear in any written material handled, and a great effort is to be made to keep the whole procedure on a plane above gossip.

OBJECT OF THE SURVEY.

1. *Point the Way to Needed Legislation.*—When the survey is completed and results tabulated, the finished report will be turned over to the children's code commission, which is about to be appointed by the governor. This should be helpful in pointing the way to needed legislation.

2. *Point the Way to Community Child Welfare Programs.*—While the survey is in progress the state committee will be working out types of community programs to fit the various community needs which will be uncovered by the local surveys. Each community will be urged to follow up the survey by promptly attending to its greatest need.

Thus, if a community becomes aware of a bad-milk situation, the state committee will be prepared to put this community in touch with the best available aids and offer suggestions for putting on a pure-milk campaign.

If a community decides, after the survey, that it should have a school nurse, or a county nurse, the state committee will have collected information concerning methods and helps for accomplishing this.

Another community may discover that it has gone far enough that it may logically try for a full-time county health organization. Every possible help will be extended in this.

Still another community may have a critical recreation and delinquency problem, another one a school-hygiene problem, and so on through the many and varied interests of the children of the state.

3. *Put New Issues into Election.*—While these communities are carrying out their various follow-up activities, the fall elections will occur. It is to be hoped that this survey will inject some new issues into local and state politics, and that the votes of the people will be given to

those men and women who will pledge themselves to a platform of children's rights.

4. *Help Secure Passage of Children's Code.*—When the legislature convenes and the children's code commission submits a report, this survey machine should convert itself into a gigantic legislative committee to see that a constructive legislative program goes through.

5. *Lead to General Campaign for "Children's Rights."*—This federation of effort and interest should persist until every local condition inimical to the well-being of children is corrected, and until every weak law is strengthened and all necessary new legislation passed, and then be passed along to the next generation in order that legislation may be enforced and social education proceed along its evolutionary course.

KANSAS WOMEN'S COMMITTEE ON CHILD WELFARE.

STATE SURVEY.

Instructions to County Chairmen.

1. Read carefully all explanatory literature and write your district chairman concerning any points which are not clear.

2. Organize your assistance. This may be done in one of several ways. Use any method which will give you the widest and most efficient support:

- a. Ask the presiding officer of each county organization which logically should be interested in furthering the project to appoint a representative to act upon an executive committee; or,
- b. Appoint as many vice-chairmen or assistants as may be helpful to you, *always remembering that one of the objects of this committee is to secure federation of effort among existing agencies.*
- c. In either event, make a special effort to secure a strong representation from the rural part of your county.
- d. Officials or agents representing special interests, such as public-health nurses, or home-demonstration agents, should be asked to serve *ex officio* on the executive committee.
- e. Call a conference of this group and discuss method of organization.

3. Secure surveyor's or other map of county and mark out survey districts. Be sure to leave no area uncovered. Make a drive for a 100 per cent survey. Any division will be acceptable to the state committee which will adequately cover the county. The state committee suggests that towns and townships be considered as survey units.

4. With the assistance of the executive committee, the county chairman shall appoint a local chairman for each survey unit. The state committee suggests:

- a. That a local chairman be appointed for each town or city of 500 population or over.
- b. That a local chairman be appointed for each township, her jurisdiction also extending to any towns of less than 500 population which may be in the township.
- c. That each of these local chairmen appoint two or more survey canvassers for each school district, or, in large school districts, each ward, included in her territory.

5. Send one list of these local chairmen to your district chairman and another direct to the secretary of the state committee, Dr. Florence Brown Sherbon, Chief, Division of Child Hygiene, State Board of Health, Topeka, Kan.

6. The secretary of the state committee will then mail survey outlines with instructions direct to each local chairman.

7. The county chairman will endeavor to see each of her local chairmen, in one or more groups if possible, and drill them in details of survey. *The success of the survey will depend upon explicitness of detail and uniformity of method. There is no such thing as too much rehearsing of details!*

8. The county chairman will set a date for beginning the survey and a time limit for completion of survey. If the labor and time involved in making the canvass seems prohibitive, the organizations may stop with the local chairmen. It is hoped, however, that every county will find it possible to carry out the full survey.

9. The county chairman will request her local chairman to forward survey data as fast as completed. She will review these reports and return any which are not complete enough for tabulation. The executive committee will then transfer totals from the local survey sheets to a tabulation sheet for the county. The committee should keep one copy for use in developing a follow-up program for the county. One copy should be sent to the district chairman.

10. When the survey returns are all in, the executive committee, at call of the county chairman, should immediately develop a follow-up program to fit the needs as revealed by the survey.

11. The state committee will furnish suggestions and assistance as requested for any type of community program.

12. The county questionnaire: Most of the information asked will be known to the chairman. One visit to the county superintendent of schools and another to the court house will secure the rest. This questionnaire should be mailed promptly to the district chairman.

QUESTIONNAIRE.

Health:

Name of county health officer..... Address.....
 Full time..... Part time..... Salary.....
 County public-health nurse (name)..... How paid.....
 Public health laboratory..... County hospital..... Sanitarium.....
 Other county health agencies.....

Education:

Home demonstration agent..... Name..... Address.....
 Agricultural agent..... Name..... Address.....
 Name of county superintendent of schools.....
 No. consolidated schools..... No. standard schools.....
 No. rural high schools..... No. town and city high schools.....
 No. parochial schools..... No. private schools.....
 Colleges or other educational institutions, business colleges, etc.....

Children in Court:

Name of probate judge..... Is there a juvenile court?.....
 Where are court children detained while awaiting trial?.....
 Have any children under 16 been kept in jail during survey year?.....
 Have any children under 16 been kept in county poor house during survey year?

How many mothers' pensions have been granted during survey year?

Are the children brought before the court given any physical or mental examination?

Organizations and Institutions:

Names of county organizations, with name of executive officer, including only groups or federations which attempt to cover a county-wide interest

Children's homes, maternity homes or other institutions.....

Agencies or agents handling dependent children in this county.....

County Fairs:

Is there a county fair?..... Is it well organized?.....
 Is any educational work for mothers put on at the fair?.....
 Name of chairman of county fair board.....

13. *Publicity.*—The interest of the public should be aroused in advance and sustained by continuous advertisement of the objects of the survey through press, pulpit, club meetings and schools.

All reports of findings, however, should be strictly censored by the county executive committee before being given any local publicity. Too much caution cannot be used to prevent sensational or premature announcement of results. Much of the good results can be nullified by injudicious statements based on small units of survey.

Instructions to Local Chairmen.

1. Call a conference of the presiding officers of the local organizations which should logically be interested in the object of the survey. Also invite individual people who should be interested by virtue of their official positions. This list may comprise the following: Presiding officers from women's clubs, chamber of commerce, ministerial union, local medical and dental societies, and any other important organizations. The mayor, the city or county superintendent of schools, the home demonstration agent, public health nurses, local health officer, and editors.

Present the matter of the survey in detail and ask for a representative, official executive committee to support the chairman in the conduct of the survey and in follow-up work.

2. Call a meeting of this executive committee. Review the plan of the survey and fix canvass districts. Appoint two or more women to make canvass in each school district or ward or other selected canvass unit.

3. Secure a surveyor's wall map of your district. Mark the canvass units plainly in a bright color. Write down boundaries of each unit for the canvassers.

4. Call a meeting of these canvassers for instruction in method of making survey:

- a. Explain object in detail.
- b. Distribute survey blanks and instructions.
- c. Study survey blank and instructions item by item.

5. Announce time limit for survey returns and urge women to start the work promptly in order that they may not be hurried at the last.

6. Arrange definitely for time and place for survey outlines to be returned to chairman. They may usually be left at some central place. They should always be placed in the personal care of some responsible individual who will keep them confidential and allow no one to see them before they are turned over to survey chairman.

7. The executive committee should transfer the data from the survey sheets to the tabulation sheets and make duplicate copies of the tabulation. One copy should be kept by the committee to furnish a basis for the follow-up program. The other sheet should be sent to the county chairman.

8. After the survey has been tabulated, call a meeting of the local executive committee and frame a statement of the results of the survey and suggest the obvious lines of immediate local effort. Send this local plan to the county chairman and ask for suggestions. The county chairman and her committee may be able to weave the local programs into a general county program.

THE LOCAL QUESTIONNAIRE.

The local chairman should fill out this questionnaire as promptly as possible and mail to the county chairman.

I. *Health.*

1. Name of city health officer..... Address.....
Full or part time..... Paid how much?.....
2. Names of public-health nurses..... How paid?.....
How much?..... Scope of work; school, visiting, community..... How long has community had these public-health nurses?

- Apparent results of their work.....
3. Health centers for weighing and measuring children, etc.....
 Laboratory..... Used for what purposes; milk.....
 Communicable diseases..... Tuberculosis.....
 Venereal diseases.....
 4. Hospitals..... How many beds?.....
 Take maternity cases.....
 5. Free school clinics..... How supported?.....
 Free dental clinic..... How supported?.....
 Other clinic..... How supported?.....
 6. Names of any child health or child welfare organizations with names
 of presiding officers.....
- (The above items cover general information which will be advantageous for the county and state committees to have in event of organized follow-up work.)
7. Is there a city water supply?..... How does it test?.....
 Is there city sewage disposal?..... Is there municipal garbage collection?.....
 Is the local milk supply satisfactory in quality?.....
 Quantity?.....
- (Every city water supply is examined regularly by the state board of health laboratory. It should also be regularly tested at the plant. Since a pure water supply is fundamental to health, it is well for the women of the community to know how their city water tests. They should request that the analyses be published in the local newspapers. This information may be obtained from the superintendent of the water plant.
 The other questions concerning sewage and garbage will be common knowledge.
 The chairman may ask the local executive committee, or better, the preliminary conference, to vote upon the question as to amount and quality of the general milk supply. She should first obtain as definite figures as possible from local milk distributors as to amount of daily consumption.)
8. Give outline of local health activities, i. e., Children's Health Conferences, Well Baby Clinics, Baby Week, Sanitary Drives (for better water, milk, etc.).
 a. Within survey year.....
 b. Previous to survey year.....
- (Should give a comprehensive survey of the growth of interest and activity along the lines of child welfare and community welfare.)
9. How many trained nurses in private practice?.....
 How many practical nurses in private practice?.....
- (This question is asked in order that the state committee may be able to compile a statement as to the nursing situation over the state. There are evidently certain districts of the state whose sick mothers and children are entirely without available nursing care.)
10. Public rest room..... How supported?.....
 Matron.....
- (A public rest room is not only a very important public health institution, but it also frequently furnishes the best place for establishing a health center for mothers and babies.)
11. Study of local vital statistics to be taken from records of local registrar and health officer. The name of registrar and boundaries of registration area, if not known to the committee, may be obtained from the State Board of Health.
 a. No. of births in town or township per year for previous three years.....
 b. No. of deaths of children under one year for previous three years.....
 c. Causes of deaths of children under one year for previous three years.....
 d. Deaths from communicable diseases of all ages for previous three years.....
 e. Cases of communicable diseases of all ages for previous three years.....
 f. Deaths of mothers at or immediately following child birth.....

(Two members of the executive committee, or any other willing women, may be asked to go to the local records and copy this data. In event that these figures disclose a high infant mortality, or the history of epidemics or presence of communicable disease, these

figures should be transferred to a spot map and used for propaganda in follow-up work. Directions for making and using spot maps will be furnished on request by the state committee.)

II. Education.

1. Has your school census been taken within the survey year?.....
If so, how many school children did it show?.....
2. How many schools in your survey unit have ten months' school during the year?.....
Nine months?..... Eight months?.....
Seven months?..... Six months?.....

III. Social and Industrial Interests of Children.

1. Is juvenile loafing and idleness a serious problem in your district?
.....
2. Work permits:
 - a. How many work permits has the superintendent of schools issued during the survey year?.....
 - b. How many of these were for children who have not completed the eighth grade?.....
 - c. How many work permits have been returned when employment terminated?.....
 - d. How many work permits have been issued by the probate judge?.....
 - e. How many of these were for children who have not completed the eighth grade?.....
 - f. How many work permits have been returned when employment terminated?.....
3. Have you a library? public, school, other..... Children's department?..... Children's librarian?.....
4. Do the children use the library extensively?.....
5. Is there a park in your district?.....
Does the community use it freely?.....
Is it well policed at night?.....
6. Social hygiene activities. Have any of the following been given:
 - a. Lectures?..... Films?..... Courses in instruction?..... Teaching in School?.....
Venereal disease campaign: Literature? lectures? films?.....

(All of these questions have a direct bearing upon the study of juvenile delinquency, recreation and associated subjects of basic importance in any state child welfare program.)

IV. Illegitimacy.

How many girls living in your community are known to have had illegitimate children during the survey year?..... How many of these had homes?..... How many remained at home and kept their babies?..... How many went to a maternity home or elsewhere for confinement?..... How many came back without their babies?..... How many of these girls had no home?..... Where did they go for confinement and care?..... Is there a maternity hospital or rescue home in your survey district?..... In how many cases was paternity established by court?..... Otherwise.....

(The chairman should use great tact in getting this information and avoid publicity. Inquiries should be made from discreet, reliable sources, probate judges, physicians, nurses, social-service workers, hospitals, and so forth. List only cases of residents of the survey district, not cases which may have come from elsewhere for the purpose of securing care. It is hoped that special effort will be made to render a report which will shed light upon this problem, which is one of the most difficult and obscure as well as one of the most imperative problems before the state to-day.)

Instructions to Canvassers.

GENERAL. First, last and always, don't talk about your findings. People will be curious and ask very insistent questions as to "How are you finding things?" Tell them the results will be published in the

papers by the proper committees, but that your instructions are to *give out no advance figures or facts.*

Second. Never under any consideration, at any time, present or future, tell anything which may have come to your knowledge in making the survey, which any individual would prefer not to have made known. The information asked is for statistical purposes only, for the benefit of all the children of the state. It would be a breach of honor and betrayal of confidence to allow this investigation to result in the hurt of any individual.

Third. Use the greatest tact in taking schedules. Explain the object fully and win the confidence of the individual before beginning to ask questions. This is the best possible opportunity to educate people who are not interested or informed. Keep patient under provocation in case some one misunderstands or impugns the motive of the survey. These cases are worth every effort to win over.

Fourth. The only way to be sure of a 100 per cent canvass is to make a visit to every house and every place of business in your district. Make a note of the address when no one is found at home and call again.

Fifth. Canvassers may go singly or in pairs as preferred. It is usually less embarrassing for a mother to give information to one person than to two. In general it works better to go in pairs in making the industrial and sanitation surveys and singly in visiting homes. *Be sure no one is missed.*

I. *Children in Industry.*

In making this investigation, one canvasser may ask the questions while the other one tallies. Be sure to see every individual employing any child under 16 for either whole or part time. *Be sure to ask every question concerning every child.*

Item A.—Tally every industry or individual employing one or more children under 16 for either whole or part time.

Items 1 and 2.—Tally for each child employed.

Item 3.—Ask to see the work permits. Count and tally them.

Item 4.—Note on these work permits how many children are stated to have completed the eighth grade. In case of absence of work permit, try to get child's statement as to age and grade; take these names, and later verify age and school grade by asking school superintendent for information. Make note of name and circumstances, in case of proof that a child is illegally employed, and hold subject to request of the State Labor Commission. You will note that there is a white permit for those who have completed the eighth grade, and a pink permit for those who have not done so.

Item 5.—This information is necessary in order to check duplications with canvassers in other districts.

Item 6.—The state committee wish this data in order to show the need all over the state for mothers' aid.

Items 7 and 8.—Tally here for each child found working under these conditions.

Item B.—(1) Make a detailed list of any industries not in operation at time of survey but which have employed children at some time during the survey year and are liable to do so again. Make any notes of interest concerning these. Write this information on a separate sheet under a number instead of a name. (2) If any farm families in survey district are given to overworking their own or foster children, list them by number instead of name. List also any families carrying on industries such as dairies, creameries, bakeries, stores and so forth and requiring regular labor of their own children. List these by number and get as accurate information as possible regarding ages, hours, school attendance and sanitary conditions.

II. Sanitation.

Items A to D. May be tallied by walking through each alley in your survey district.

Item E. Should be filled out from personal visit of canvassers.

III. Dependent Children.

Item A.—On visiting a mother who comes under this item, use the greatest care to explain that the object of this survey is to get better laws, and, if possible, legislation which will enable every mother to stay at home and raise her own family. This legislation cannot be obtained unless the need can be shown. All information will be held strictly confidential and no names are taken. When items 1 and 4 are matters of common knowledge, these questions need not be asked.

Item B.—Confidence must be established before asking the questions under B, and it must be made clear that these statistics are necessary to the state legislative committees. Also, repeat assurance of confidential nature of information. Under 4 (d) make note of details 1, 2 and 3 on a separate sheet of paper, giving the mother a number but not a name.

(5) This means children who have been before the court for some offense.

(6) This means children who have been referred to the truancy officer or who are known to be incorrigible at home or in school.

Item C.—This information may necessitate evening calls on fathers who maintain a home. In the case of fathers whose children are cared for elsewhere, it may be necessary to get this data at the industrial plants, boarding houses, etc. This question should be asked while canvassing for children at work. Take the address of each father, in order to avoid duplication. Enter no names.

Interview the father personally, if possible. Make clear that the information is confidential and that it is in the nature of a census to find out how many children do not have a mother's care.

Statements of older children or housekeepers may be taken, if it is impossible to interview the father. Do not press the matter of confidential or privileged information with children or housekeepers. Ask if they can tell you why the mother is not in the home, rather than ask if she has deserted or is insane, etc.

Item D.—(5) and (6) are the same as under A.

Item E.—Refers to institutions and homes, and also, *especially*, to *private homes where children, not of the family, are taken to board*. All these may be listed by name and address on a separate sheet of paper.

Item F.—This item is very important, as there is no agency in the state at present which knows how many children are living in foster homes, or where they are. Ask every family if they have a foster child or a boarding child for whom someone is paying. Tally foster children and take name and address of boarding homes under E.

IV. Defective Children.

Items A, B and C.—Should be asked in every home where there are children.

Item D.—After the confidence of the mother has been obtained, this question usually can be asked without offense. It may be asked tactfully, such as asking if she has any children who are in need of training which they cannot get in their school or in the home, such as speech defects, or because they cannot keep up with their grades, etc.

Items E to K.—Write yes or no.

Item L.—If this information is available, it may be obtained from the school authorities.

Item M.—Write yes or no.

Item N.—Make special note of any such cases on a separate sheet of paper.

V. Delinquent Children.

Items A, B and C.—This information may be obtained from the truancy officer himself.

Items D and E.—This information will be answered from common knowledge.

Item F.—Check as indicated.

Item G.—(1) List by numbers; write no names. Record condition of sanitation and management after personal visit.

Item G.—(2) Ask at the school.

Item G.—(3) Refers to games and sports located within the district. If use is made of facilities in another district, write the fact down.

Item G.—(4) and (5). Ask at the school if not known to canvassers.

Item G.—(6) and (7). Answer from the best judgment and information of canvassers.

Item H.—Get from school superintendent.

VI. Community Health Education.

Items A, B and C.—Answer from general inquiry.

TALLY SHEET FOR CANVASSERS.

Directions.—Tally on line following each question according to usual five-check method. Make tally marks small and compact but clear and easily readable. In case of error, draw curved line about tally mark which is not to be counted. Where lump figures are given, write figures instead of tally marks.

I. Children in Industry.

	Total.
A. How many industries in your survey district employ children under 16?.....
1. Age: 15-16
14-15
Under 14
2. Average work day: 10-12 hrs.
9 hrs.
8 hrs.
7 hrs.
6 hrs.
Less than 6 hrs.....
3. How many of these children have work permits on file?
4. How many of these children have completed the eighth grade?
5. How many children working in these industries live outside of this survey district?.....
Make note of district in which these children live...
6. In how many of these cases does the child's mother work?
7. How many of the above children are working under hazardous conditions?
8. How many of the above children work under insani- tary conditions?
B. List any special industrial problems affecting the welfare of children which may exist in your survey district. These may include:	
1. Seasonal occupations, such as potato picking, berry picking, canning, sugar beet raising.....
2. Excessive home work at certain seasons, especially in the country.....

II. Sanitation.

- A. How many homes in survey unit have outside toilets?.....
How many of these have fly-proof vaults?.....
- B. How many families in survey unit keep cows in town?.....
Hogs?..... Horses?..... In how many of
these is the manure exposed to flies?.....
- C. How many open wells are there in the survey unit?.....
- D. How many families are careless in disposal of garbage
and waste?
- E. Does your school have sanitary toilet facilities?.....
- F. Does your school have good drinking water?.....
Bubbling fountain?..... Individual cups?.....
- G. How many dairies are there in your district?.....
How many are clean?..... How many are modern?.....
How many are insanitary?.....

III. Dependent Children.

- A. How many dependent mothers are living in your survey
district?
- 1. How many of these have been left with dependent
children because of divorce?.....
- 2. Death of father?.....
- 3. Desertion of father?.....
- 4. Insanity or imprisonment?.....
- 5. Other causes?.....
- B. How have the children of dependent mothers been cared
for:
 - 1. Taken into homes of relatives or friends.....
 - 2. Placed in orphanages or boarded out by mother... ..
 - 3. Legally relinquished, adopted or taken by court.... ..
 - 4. Children remained in home:
 - a. Mother supported by relatives.....
 - b. Mother received insurance.....
 - c. Mother receiving Mothers' Pension, stays at
home
 - d. Mother receiving Mothers' Pension, works.... ..
 - e. Mother receiving county aid or other charity.. ..
 - f. Mother works to support family.....
 - 1. Kind of work.....
 - 2. Hours
 - 3. Wages
 - g. Children contribute to support of home.....
 - 5. How many children of these mothers have become
delinquent?
 - 6. How many of these children have become truant or
incorrigible?
- C. How many fathers have been left alone with children:
 - 1. Because of divorce.....
 - 2. Death of mother.....
 - 3. Desertion of mother.....
 - 4. Insanity or imprisonment.....
 - 5. Other causes
- D. How have the children left in the care of their fathers
been cared for:
 - 1. Taken into homes of relatives or friends.....
 - 2. Placed in orphanages or boarded out by father.... ..
 - 3. Legally relinquished, adopted or taken by court.... ..
 - 4. Children remained in home:
 - a. With housekeeper.....
 - b. Without housekeeper.....

5. How many of these children have become delinquent?
 How many of these children have become truant or
 incorrigible?
 E. What orphanages, children's homes or boarding places for
 children are there in your survey district?.....
 F. How many children are living in foster homes in your sur-
 vey district?.....

IV. *Defective Children.*

- A. How many crippled children under 16 years of age live
 in your survey district?.....
 B. How many of these should have special treatment which
 cannot be obtained under present conditions?.....
 C. How many children in your district are suffering from
 other physical defects who should have care which can-
 not be obtained under present conditions?.....
 D. How many mentally retarded children are there in your
 survey district?.....
 E. Have you an ungraded room in your schools?.....
 F. Are the school children in your survey district examined
 by a nurse?.....
 G. Are the school children in your survey district examined
 by a physician?.....
 H. Are the school children in your survey district weighed
 each month?
 I. Has the percentage of underweight been computed in your
 school?
 J. Is any effort being made in your community to combat
 malnourishment or underweight.....
 Do you have a school cafeteria?.....
 Free school lunch?.....
 Hot lunch?
 Midsession lunch for underweights?.....
 K. Have the school children in your district had free dental
 inspection?
 L. If so, can you tell how many children have had dental de-
 fects corrected as a result of this inspection?.....
 M. Have the sight and hearing of the school children of your
 district been tested?.....
 N. Are there any deaf or blind children under 16 years of age
 in your district who are not attending the special state
 schools?

V. *Delinquent Children.*

- A. Do you have a truancy officer?.....
 B. How many cases of truancy have been handled during sur-
 vey year?
 C. What reasons are given for this truancy?
 1. Dislike of school.....
 2. Carelessness of parents.....
 3. Illness
 4. Poverty
 5. Feeble-mindedness
 D. How many children from this district are now in state
 reformatories?
 E. Does the community do anything to help children return-
 ing from reformatories?.....

F. What agencies are interested in providing recreation for your young people and children? Check those that are doing live work: Schools; churches; grange; commercial clubs; Y. M. C. A.; Y. W. C. A.; Boy Scouts; Camp-fire Girls; fraternal orders; others.....

G. What facilities exist in your survey district for employing the leisure time of your young people?

1. Commercial amusements:

Sanitary.

Moral and social regulation.
(Good or bad.)

a. Movies

b. Dance halls

c. Pool rooms

d. Skating rinks

e. Bowling alleys

f. Ball parks

g. Other

2. Is there a playground in this survey unit?.....

Supervised?

How supported?

Well equipped?

Used freely?

3. Other games and sports:

Tennis

Golf

Athletics

Swimming

Boating

4. Community centers: School used for social center.. ..

Other social centers.....

Do you have a literary society or other social organization for young people?.....

5. School gardens?

6. Are your young people given to "joy riding" or other questionable diversions?

7. Do your young children run the streets or play in unsupervised "gangs"?

H. Do your schools give any vocational training in—

Agriculture?

Cooking?

Sewing?

Manual training?

Typewriting?

Business courses?

Home nursing?

Child care?

Technical courses?

VI. Community Health Education.

A. Have home-nursing classes for mothers been given in your district during survey year?.....

During year previous to survey year?.....

B. Have girls of school age taken these courses?.....

C. Have Little Mothers' Leagues ever been organized in your survey district?

TWO EPOCH-MAKING EVENTS IN CHILD WELFARE.

I. The White House Conference.

On January 25 and 26, 1909, there assembled in Washington, at the call of President Roosevelt, a conference on the care of dependent children. To this conference there came from nearly every state in the Union men and women actively engaged in the care of dependent children. In transmitting a report of the proceedings, President Roosevelt said:

"The subject considered is one of high importance to the well-being of the nation. The census bureau reported in 1904 that there were in orphanages and children's homes about 93,000 dependent children. There are probably 50,000 more (the precise number never having been ascertained) in private homes, either on board or in adopted homes provided by the generosity of foster parents. In addition to these, there were 25,000 children in institutions for juvenile delinquents.

"Each of these children represents either a potential addition to the productive capacity and the enlightened citizenship of the nation, or, if allowed to suffer from neglect, a potential addition to the destructive forces of the community. The ranks of criminals and other enemies of society are recruited in an altogether undue proportion from children bereft of their natural homes and left without sufficient care.

"The interests of the nation are involved in this army of children no less than in our great material affairs."

This conference adopted, unanimously, a set of standards which still remain the most authoritative expression we have of justice and expediency in the dealing with this class of children.

II. The Children's Bureau Conference on Child Welfare Standards.

The children's bureau conference on child welfare standards was called by the secretary of labor at the request of President Wilson. The purpose of the undertaking was to formulate and to publish standards for the better protection of children. The preliminary conference was held at Washington May 5 to 8, 1919, just ten years after the famous white house conference.

The Washington conference was participated in by many American authorities. It was advised by representatives of Belgium, France, Great Britain, Italy, Japan and Serbia. The foreign delegates reported especially on what their nations had learned concerning the better protection of children as a result of their war experiences.

The Washington conference divided into three sections. These considered:

1. Child Labor and Education.
2. Public protection of the health of mothers and children.
3. Children in need of special care.

On the following pages will be found a summary of the standards submitted by the Washington conference and revised by the committee appointed for that purpose in accordance with suggestions made by regional conferences. These are intended only as minimum standards and not as in any way limiting the degree of protection which an advanced state might desire to give its children.

SUGGESTED MINIMUM STANDARDS IN CHILD WELFARE.

I. Minimum Standards for Children Entering Employment.

1. *Age Minimum.*—Provides for an age minimum for employment of minors under 21 and prohibits employment of minors in dangerous, unhealthy, or hazardous occupations or at any occupation or at any work which will retard their proper physical or moral development.

2. *Educational Minimum.*—All children between 7 and 16 years of age shall be required to attend school for at least nine months each year. Children between 16 and 18 years of age who have completed the eighth but not the high-school grade and are legally and regularly employed shall be required to attend day continuation schools at least eight hours a week. Children between 16 and 18 who have not completed the eighth grade or children who have completed the eighth grade and are not regularly employed shall attend full-time school. Occupational training especially adapted to their needs shall be provided for those children who are unable because of their mental subnormality to profit by ordinary school instruction. Vacation schools placing special emphasis on healthful play and leisure-time activities, shall be provided for all children. Full-time attendance officers adequately proportioned to the school population shall be provided in cities, towns and counties to enforce the school-attendance law. The enforcement of school-attendance laws by city, town, or county school authorities shall be under state supervision.

3. *Physical Minimum.*—A child shall not be allowed to go to work until he has had a physical examination by a public-school physician or other medical officer especially appointed for that purpose by the agency charged with the enforcement of the law, and has been found to be of normal development for a child of his age and physically fit for the work at which he is to be employed. There shall be annual physical examination of all working children who are under 18 years of age.

4. *Factory Inspection and Physical Examination of Employed Minors.*—Inspection for the enforcement of all child-labor laws, including those regulating the employment of children in mines or quarries, shall be under one and the same department. The number of inspectors shall be sufficient to insure semiannual inspections of all establishments in which children are employed, and such special inspections and investigations as are necessary to insure the protection of the children. Provision should be made for a staff of physicians adequate to examine annually all employed children under 18 years of age.

5. *Hours of Employment.*—No minor shall be employed more than 8 hours a day or 44 hours a week. The maximum working day for children between 16 and 18 shall be shorter than the legal working day for adults. The hours spent at continuation schools by children under 18 years of age shall be counted as part of the working day. Night work for minors shall be prohibited between 6 p. m. and 7 a. m.

6. *Minimum Wage.*—Minors at work shall be paid at a rate of wages which for full-time work shall yield not less than the minimum essential for the "necessary cost of proper living, as determined by minimum-wage commission or other similar official board." During a period of learning they may be rated as learners and paid accordingly. The length of the learning period should be fixed by such commission, or other similar official board, on educational principles only.

7. *Placement and Employment Supervision.*—There shall be a central agency which shall deal with all juvenile employment problems. Adequate provision shall be made for advising children when they leave school of the employment opportunities open to them, for assisting them in finding suitable work, and providing for them such supervision as may be needed during the first few years of their employment. All agencies working toward these ends shall be coördinated through the central agency.

II. Minimum Standards for Public Protection of the Health of Mothers and Children.

MATERNITY.

1. Maternity or prenatal centers, sufficient to provide for all cases not receiving prenatal supervision from private physicians. The work of such a center should include:

- (a) Complete physical examination by physician as early in pregnancy as possible, including pelvic measurements, examination of heart, lungs, abdomen, and urine, and the taking of blood pressure; internal examination before seventh month in primipara; examination of urine every four weeks during early months, at least every two weeks after six month, and more frequently if indicated; Wassermann test whenever possible, especially when indicated by symptoms.
- (b) Instruction in hygiene of maternity and supervision throughout pregnancy, through at least monthly visits to a maternity center until end of sixth month, and every two weeks thereafter. Literature to be given mother to acquaint her with the principles of infant hygiene.
- (c) Employment of sufficient number of public-health nurses to do home visiting and to give instructions to expectant mothers in hygiene of pregnancy and early infancy; to make visits and to care for patient in puerperium; and to see that every infant is referred to a children's health center.
- (d) Confinement at home by a physician or a properly trained and qualified attendant, or in a hospital.
- (e) Nursing service at home at the time of confinement and during the lying-in period, or hospital care.
- (f) Daily visits for five days, and at least two other visits during second week by physician or nurse from maternity center.
- (g) At least ten days' rest in bed after a normal delivery, with sufficient household service for four to six weeks to allow mother to recuperate.
- (h) Examination by physician six weeks after delivery before discharging patient.

Where these centers have not yet been established, or where their immediate establishment is impracticable, as many as possible of these provisions here enumerated should be carried out by the community nurse, under the direction of the health officer or local physician.

2. Clinics, such as dental clinics and venereal clinics, for needed treatment during pregnancy.

3. Maternity hospitals, or maternity wards in general hospitals, sufficient to provide care in all complicated cases and for all women wishing hospital care; free or part-payment obstetrical care to be provided in every necessitous case at home or in a hospital.

4. All midwives to be required by law to show adequate training, and to be licensed and supervised.

5. Adequate income to allow the mother to remain in the home through the nursing period.

6. Education of general public as to problems presented by maternal and infant mortality and their solution.

INFANTS AND PRE-SCHOOL CHILDREN.

1. Complete birth registration.

2. Prevention of infantile blindness by making and enforcing adequate laws for treatment of eyes of every infant at birth.

3. Sufficient number of children's health centers to give health instruction under medical supervision for all infants and children not under care of private physician, and to give instruction in breast feeding and in care and feeding of children, to mothers. This center to include a nutrition and dental clinic.

4. Children's health center to provide or to coöperate with sufficient number of public-health nurses to make home visits to all infants and children of pre-school age needing care.

5. Dental clinics; eye, ear, nose and throat clinics; venereal and other clinics for the treatment of defects and disease.

6. Children's hospitals, or beds in general hospitals, or provision for medical and nursing care at home, sufficient to care for all sick infants and young children.

7. State licensing and supervision of all child-caring institutions or homes in which infants or young children are cared for.

8. General educational work in prevention of communicable disease and in hygiene and feeding of infants and young children.

SCHOOL CHILDREN.

1. Proper location, construction, hygiene, ventilation, and sanitation of schoolhouse; adequate room space—no overcrowding.

2. Adequate playground and recreational facilities, physical training, and supervised recreation.

3. Adequate space and equipment for school health work and available laboratory service.

4. Full-time school nurse to give instruction in personal hygiene and diet, to make home visits to advise and instruct mothers in principles of hygiene and nutrition and to take children to clinics with permission of parents.

5. Part-time physician with one full-time nurse for not more than 2,000 children; if physician is not available, one school nurse for every 1,000 children; or full-time physician with two full-time nurses for 4,000 children for:

(a) Complete standardized basic physical examinations once a year, with determination of weight and height at beginning and end of each school year; monthly weighing wherever possible.

(b) Continuous health record for each child to be kept on file with other records of the pupil. This should be a continuation of the pre-school health record which should accompany the child to school.

(c) Special examinations to be made of children referred by teacher or nurse.

(d) Supervision to control communicable disease.

(e) Recommendation of treatment for all remediable defects, diseases, deformities, and cases of malnutrition.

(f) Follow-up work by nurse to see that physician's recommendations are carried out.

6. Available clinics for dentistry, nose, throat, eye, ear, skin, and orthopedic work; and for free vaccination against smallpox.

7. Open-air classes for pre-tuberculars. Special classes for children needing some form of special instruction due to physical or mental defect.

8. Nutrition classes for physically subnormal children, and the maintenance of midmorning lunch or hot noonday meal when necessary.

9. Examination by psychiatrist of all atypical or retarded children.

10. Education of school child in health habits, including hygiene and care of young children.

11. General educational work in health and hygiene, including education of parent and teacher, to secure full coöperation in health program.

III. Standards Relating to "Children in Need of Special Care."

1. *General statement.*—The conclusions of the white house conference of 1909 on the care of dependent children are reaffirmed in all essentials. They have been guides for communities and states in reshaping their plans for children in need of special care. They are commended for consideration to all communities whose standards do not as yet conform to them, so that they may be translated into practice in the various states.

The fundamental rights of childhood are normal home life, opportunities for education, recreation, vocational preparation for life, and moral, religious, and physical development in harmony with American ideals and the educational and spiritual agencies by which these rights of the child are normally safeguarded.

Upon the state devolves the ultimate responsibility for children who are in need of special care by reason of unfortunate home conditions, physical or mental handicap, or delinquency. Particular legislation is required to insure for such children the nearest possible approach to normal development.

2. *Adequate income.*—Home life which is, in the words of the conclusions of the white house conference, "the highest and finest product of civilization" cannot be provided except upon the basis of an adequate income for each family.

3. *Assistance to mothers.*—The policy of assistance to mothers who are competent to care for their own children is now well established. It is generally recognized that the amount provided should be sufficient to enable the mother to maintain her children suitably in her own home, without resorting to such outside employment as will necessitate leaving her children without proper care and oversight; but in many states the allowances are still entirely inadequate to secure this result under present living costs. The amount required can be determined only by careful and competent case study, which must be renewed from time to time to meet changing conditions.

4. *State supervision.*—A state board of charities or a similar supervisory body should be responsible for the regular inspection and licensing of every institution, agency, or association, incorporated or otherwise, which receives or cares for mothers with children or children who suffer from physical or mental handicaps, or who are delinquent, dependent, or without suitable parental care, and should have authority to revoke such licenses for cause and to prescribe forms of registration and report. This state agency should maintain such supervision and visitation of children in institutions and children placed in family homes as will insure their proper care, training, and protection. The incorporation of private organizations caring for children should be required, and should be subject to the approval of the state board of charities or similar body. State supervision should be conceived and exercised in harmony with democratic ideals which invite and encourage the service of efficient, altruistic forces of society in the common welfare.

5. *Removal of children from their homes*—Unless unusual conditions exist, the child's welfare is best promoted by keeping him in his own home. No child should be permanently removed from his home unless it is impossible so to reconstruct family conditions or build and supplement family resources as to make the home safe for the child, or so to supervise the child as to make his continuance in the home safe for the community. In case of removal separation should not continue beyond the period of reconstruction.

6. *Home care.*—The aim of all provision for children who must be removed from their own homes should be to secure for each child home life as nearly normal as possible, to safeguard his health, and to insure

for him the fundamental rights of childhood. To a much larger degree than at present, family homes may be used to advantage in the care of such children.

7. *Principles governing child placing.*—Before a child is placed in other than a temporary foster home, adequate consideration should be given to his health, mentality, character, and family history and circumstances. Arrangements should be made for correcting remediable physical defects and disease.

Complete records of the child are necessary to a proper understanding of his heredity and personality, and of his development and progress while under the care of the agency.

Particular consideration should be given to children who are difficult to place and who require provision adapted to their peculiar needs.

Careful and wise investigation of foster homes is prerequisite to the placing of children. Adequate standards should be required of the foster families as to character, intelligence, experience, training, ability, income, environment, sympathetic attitude, and their ability to give the child proper moral and spiritual training. When practicable children should be placed in families of the same religious faith as the parents, or the last surviving parent.

A complete record should be kept of each foster home, giving the information on which approval was based. The records should show the agency's contacts with the family from time to time, indicating the care given the child entrusted to it. In this way special abilities in the families will be developed and conserved for children.

Supervision of children placed in foster homes should include adequate visits by properly qualified and well-trained visitors who should exercise watchfulness over the child's health, education, and moral and spiritual development. Periodic physical examinations should be made. Supervision of children in boarding homes should also involve the careful training of the foster parents in their task. Supervision should not be made a substitute for the responsibilities which properly rest with the foster family.

The transfer of the legal guardianship of a child should not be permitted save with the consent of a properly designated state department or a court of proper jurisdiction.

In all cases involving the legal adoption of children, the court should make a full inquiry into all the facts through its own visitor or through some other unbiased agency, before awarding the child's custody.

8. *Children in institutions.*—The stay of children in institutions for dependents should be as brief as possible. The condition of all children in such institutions should be carefully studied at frequent intervals, in order to determine whether they should be restored to their own homes, placed in foster homes, or transferred to institutions better suited to their needs. While they do remain in institutions, their condition should approximate as nearly as possible that of normal family life as to health, recreation, schooling and spiritual, æsthetic, civic and vocational training.

9. *Care of children born out of wedlock.*—The child born out of wedlock constitutes a very serious problem, and for this reason special safeguards should be provided. Save for unusual reasons both persons should be held responsible during its minority, and especially should the responsibility of the father be emphasized. Care of the child by its mother is highly desirable, particularly during the nursing months. No parent of a child born out of wedlock should be permitted to surrender the child outside its own family, save with the consent of a properly-designated state department or a court of proper jurisdiction.

Each state should make suitable provision of a humane character for establishing paternity and guaranteeing to children born out of wedlock the rights naturally belonging to children born in wedlock. The

fathers of such children should be under the same financial responsibilities and the same legal liabilities toward their children as other fathers. The administration of the courts with reference to such cases should be so regulated as not only to protect the legal rights of the mother and child, but also to avoid unnecessary publicity and humiliation.

The treatment of the unmarried mother and her child should include the best medical supervision, and should be so directed as to afford the widest opportunity for wholesome, normal life.

10. *Care of physically defective children.*—Special care and educational opportunities for deaf, blind and crippled children should be provided in the public educational system, local or state.

11. *Mental hygiene and care of mentally defective children.*—The value of the first seven years of childhood from the point of health, education, and morals and formative habits cannot be overestimated. Throughout childhood attention should be given to the mental hygiene of the child—the care of the instincts, emotions, and general personality, and of environment conditions. Special attention should be given to the need for training teachers and social workers in mental hygiene principles.

Each state should assume the responsibility for thorough study of the school and general population for the purpose of securing data concerning the extent of the feeble-mindedness and subnormality.

Adequate provision should be made for such mentally defective children as require institutional care. Special schools or classes with qualified teachers and adequate equipment should be provided by educational authorities for such defective children as may be properly cared for outside of institutions. The state should provide for the supervision and after-care of feeble-minded persons at large in the community, especially those paroled from institutions. Custodial care in institutions for feeble-minded children should not be resorted to until after due consideration of the possibility of adjustment within the community.

12. *Juvenile courts.*—Every locality should have available a court organization providing for separate hearings of children's cases; a special method of detention for children, entirely apart from adult offenders; adequate investigation for every case; provision for supervision or probation by trained officers, such officers in girls' cases to be women; and a system for recording and filing social as well as legal information.

In dealing with children the procedure should be under chancery jurisdiction, and juvenile records should not stand as criminal records against the children.

Whenever possible such administrative duties as child placing and relief should not be required of the juvenile court, but should be administered by agencies organized for that purpose.

Thorough case study should invariably be made. Provision for mental and physical examinations should be available.

The juvenile victims of sex offenses are without adequate protection against unnecessary publicity and further corruption in our courts. To safeguard them the jurisdiction of the juvenile court should be extended to deal with adult sex offenders against children, and all safeguards of that court be accorded to their victims; or if these cases are dealt with in other courts, the facts revealed in the juvenile court should be made available, and special precautions should be taken for the protection of the children, as here suggested.

13. *Rural social work.* Work for children needing special care has been neglected in rural parts of the country. Social conditions in rural communities are often as acute as in urban communities. The principles of child care, as enumerated above, are applicable to rural needs. Agencies for rural service should be encouraged, and should be adapted to the

peculiar needs of rural communities. The county is usually the best administrative unit.

14. *Scientific information.*—There is urgent need of a more adequate body of scientific literature dealing with principles and practice in the children's field of social work, and the meeting of this need is a responsibility resting on those so engaged. Careful interpretation and analysis of methods and results of care and the publishing of these findings must precede the correcting of many present evils in practice. Boards of directors, trustees, and managers should particularly consider participation in the preparation of such a body of facts and experience as being a vital part of the work of their staff members.

IV. General Minimum Standards.

Economic and social standards.—At a general session of the Washington conference the economic and social aspects of child-welfare standards were discussed. While detailed standards were not formulated in this wide field, it was recognized that an adequate wage for the father, wholesome and pleasant housing and living conditions, and the abolition of racial discrimination are fundamentals to the realization of any child-welfare program.

Recreation.—The desire for recreation and amusement is a normal expression of every child, which must be considered in any program for the physical and moral education of children. Parents and others charged with their care should be educated as to the importance of recreation. Public provision should be made for wholesome play and recreation, both indoor and outdoor, under trained leadership, and especially adapted to the different age periods of the child.

Commercialized amusements should be safeguarded by official supervisors having a scientific knowledge of recreation.

Child-welfare legislation.—The child-welfare legislation of every state requires careful reconsideration as a whole at reasonable intervals, in order that necessary revision and coördination may be made that new provisions may be incorporated in harmony with the best experience of the day. In states where children's laws have not had careful supervision as a whole within recent years, a child-welfare committee or commission should be created for this purpose. Laws enacted by the several states should be in line with national ideals and uniform as far as desirable, in view of diverse conditions in the several states.

Child welfare legislation should be framed by those who are thoroughly familiar with the conditions and needs of children and with administrative difficulties. It should be drafted by a competent lawyer in such form as to accomplish the end desired by child-welfare experts and at the same time be consistent with existing laws.

BULLETIN

OF THE

Kansas State Board of Health.

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S. J. CRUMBINE, M. D., Editor.

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MARCH, 1920.

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-

Get out into the open!

The "Clean-up, paint-up" time is here.

Exercise is necessary to promote health.

"Walk a mile a day to keep the doctor away."

Every deviation from the normal is a danger signal—"Keep fit!"

Would you insure against typhoid fever! Get vaccinated.

The average adult should have at least eight hours sleep daily to "Keep fit!"

Now I see the secret of the making of the best persons. It is to grow in the open air.—*Walt Whitman.*

Hot-house people are like hot-house plants; they can't stand exposure to severe weather.

Now is the time to take your annual spring tonic—the daily use of the hoe or the rake.

Give me intelligent motherhood and good prenatal conditions and I have no doubt of the future of this or any other nation.—*Rt. Hon. John Burns.*

Every physician doing obstetrical practice in the state is entitled to our free package of one per cent solution of silver nitrate. If you have not received one, send for it.

"My son, attend to my words;
Incline thine ear unto my sayings;
Let them not depart from thine eyes;
Keep them in the midst of thine heart.
For they are life unto those that find them,
And health unto all their flesh."

—*Proverbs, 4:20-22.*

The Kentucky State Board of Health in coöperation with the University of Louisville announces the opening of a School for Health Officers and a School for Public Health Nurses. Good luck to "Ol' Kentuck'."

MORBIDITY REPORT FOR FEBRUARY, 1920.

COUNTIES AND CITIES.	Typhoid and Paratyphoid..	Smallpox.....	Diphtheria.....	Influenza.....	Scarlet Fever..	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenpox.....	Measles.....	Pneumonia (acute lobar)...	Meningitis (epidemic)....	Polio myelitis (epidemic).....	Other Diseases (see Addenda).
THE STATE.....	45	374	124	48,140	305	549	10	180	278	177	1173	10	0	208
Allen, except.....	0	1	1	786	2	7	0	0	0	0	15	1	0	1
Iola.....	0	0	0	0	3	0	0	0	1	0	0	0	0	1
Anderson.....	0	4	0	0	2	13	0	0	0	0	9	0	0	1
Atchison, except.....	0	0	0	480	4	0	0	0	1	0	12	0	0	1
Atchison city.....	0	0	1	698	2	0	0	0	0	0	3	0	0	0
Barber.....	0	0	0	23	2	0	0	0	0	0	0	0	0	0
Barton, except.....	0	1	0	312	2	1	0	0	0	2	14	0	0	1
Great Bend.....	0	0	0	0	1	0	0	1	0	1	17	0	0	0
Bourbon, except.....	0	2	0	273	4	6	0	0	0	0	8	0	0	0
Fort Scott.....	0	5	1	192	0	1	0	0	1	0	11	1	0	4
Brown.....	0	9	0	773	5	10	0	0	1	1	8	0	0	0
Butler, except.....	0	4	0	1541	7	3	0	0	1	1	20	0	0	0
Angusta.....	0	1	2	0	2	0	0	0	2	0	19	0	0	1
El Dorado.....	0	23	7	0	1	11	0	3	0	0	21	0	0	1
Chase.....	0	2	0	447	2	4	0	19	0	11	13	0	0	1
Chautauqua.....	0	0	1	216	0	1	0	0	1	1	8	0	0	0
Cherokee, except.....	0	1	3	1715	9	7	0	1	0	0	29	0	0	0
Galena.....	1	0	0	0	1	0	0	0	0	0	2	0	0	3
Cheyenne.....	0	0	0	28	1	0	0	0	2	0	0	0	0	0
Clark.....	0	0	0	75	0	0	0	0	0	0	0	0	0	0
Clay.....	0	14	3	500	4	1	0	3	0	0	2	0	0	0
Cloud, except.....	0	1	1	519	1	0	0	0	2	0	3	0	0	0
Concordia.....	0	0	0	0	0	0	0	0	1	0	4	0	0	0
Coffey.....	0	0	0	276	9	2	0	0	1	1	14	0	0	0
Comanche.....	2	0	4	2.8	0	0	0	0	0	0	0	0	0	0
Cowley, except.....	0	0	0	1302	0	1	0	0	0	1	6	0	0	0
Arkansas City.....	0	0	0	0	8	1	0	0	6	0	16	0	0	4
Winfield.....	0	1	2	0	5	1	0	0	0	5	4	0	0	2
Crawford, except.....	1	1	2	1701	2	1	0	1	0	6	48	0	0	2
Pittsburg.....	0	7	1	229	1	1	1	3	1	0	9	1	0	2
Decatur.....	0	2	0	512	5	0	1	0	0	6	11	0	0	0
Dickinson.....	0	22	2	142	5	2	0	17	4	1	5	0	0	0
Doniphan.....	0	5	2	271	4	33	0	2	2	2	8	0	0	0
Douglas, except.....	0	0	0	392	4	0	0	8	6	1	10	0	0	0
Lawrence.....	0	2	0	470	1	1	0	0	5	8	11	1	0	2
Edwards.....	0	0	0	464	0	6	0	0	0	0	4	0	0	0
Elk.....	0	0	0	137	0	1	0	0	0	0	6	0	0	0
Ellis.....	0	0	5	73	4	0	0	0	0	0	0	0	0	0
Ellsworth.....	0	0	2	198	1	20	6	2	7	1	11	0	0	1
Finney.....	0	11	0	10	0	0	0	0	0	0	5	0	0	0
Ford, except.....	0	0	4	1218	14	0	0	0	0	0	12	0	0	0
Dodge City.....	0	1	0	0	3	0	0	1	1	0	3	0	0	3
Franklin, except.....	0	0	0	752	1	0	0	0	0	0	0	0	0	0
Ottawa.....	0	0	0	0	0	9	0	0	4	0	0	0	0	1
Geary, except.....	0	0	2	672	0	1	0	0	2	0	3	0	0	0
Junction City.....	0	0	2	0	0	0	0	6	15	1	8	0	0	0
Gove.....	0	0	0	224	0	0	0	0	0	0	0	0	0	0
Graham.....	0	0	0	193	0	1	0	0	0	0	1	0	0	0
Grant.....	0	1	0	22	0	0	0	0	0	0	2	0	0	0
Gray.....	0	1	0	210	8	0	0	1	2	0	12	0	0	0
Greeley.....	0	0	0	98	0	0	0	0	0	0	0	0	0	0
Greenwood.....	0	2	0	725	0	19	0	9	1	0	28	0	0	0
Hamilton.....	0	0	0	46	0	0	0	0	3	0	1	0	0	0
Harper.....	0	0	2	787	4	0	0	3	3	0	6	1	0	1
Harvey, except.....	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Newton.....	0	0	0	0	0	0	0	0	2	2	0	0	0	1
Haskell*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman.....	0	15	0	47	0	0	0	0	0	0	0	0	0	0
Jackson.....	0	4	0	53	6	0	0	2	0	1	2	0	0	0
Jefferson.....	0	0	0	561	8	0	0	0	0	0	6	0	0	0
Jewell.....	0	33	0	474	1	1	0	6	1	5	3	0	0	3
Johnson.....	0	0	1	33	1	6	0	0	0	0	16	0	0	0
Kearny.....	0	0	0	69	0	0	0	0	0	0	3	0	0	0
Kingman.....	0	2	0	598	2	0	0	0	0	3	25	0	0	1
Kiowa.....	0	4	0	253	2	3	0	6	3	0	5	0	0	0
Labette, except.....	0	3	1	210	4	15	0	0	0	1	6	1	0	3
Parsons.....	0	7	3	217	1	5	0	0	5	0	15	0	0	0
Lane.....	0	0	0	12	0	0	0	0	0	1	23	0	0	0
Leavenworth, except.....	0	4	1	518	0	0	0	0	1	0	20	0	0	0
Leavenworth city.....	0	1	4	266	0	0	0	2	0	0	0	0	0	0

MORBIDITY REPORT FOR FEBRUARY, 1920—Concluded

COUNTIES AND CITIES.	Typhoid and Paratyphoid..	Smallpox.....	Diphtheria.....	Influenza.....	Scarlet Fever...	Measles (morbilli).....	German Measles (rubella).....	Whooping Cough.....	Chickenpox.....	Mumps.....	Pneumonia (acute lobar)...	Meningitis (epidemic)....
Lincoln.....	0	2	0	679	12	0	0	0	0	0	2	0
Linn.....	0	1	4	578	1	30	0	2	0	0	5	0
Logan.....	0	0	0	86	0	0	0	0	1	0	1	0
Lyon, except Emporia.....	1	0	0	534	2	1	0	0	1	0	10	0
Marion.....	0	2	1	1491	7	1	0	4	5	8	25	0
Marshall.....	0	1	0	585	0	4	0	0	9	1	4	0
McPherson.....	0	0	0	965	0	0	0	0	0	0	0	0
Meade.....	0	0	0	15	0	0	0	0	0	0	1	0
Miami.....	0	2	0	448	1	32	0	6	0	1	17	0
Mitchell.....	0	1	0	376	0	1	0	0	0	0	3	0
Montgomery, except Coffeeville.....	1	0	0	710	0	1	0	1	0	0	15	0
Independence.....	0	1	1	294	3	11	0	0	1	0	4	0
Morris.....	0	3	1	45	1	1	0	6	8	0	0	0
Morton.....	0	0	0	216	5	4	0	0	0	0	2	0
Morton.....	0	4	0	119	8	4	0	0	0	4	4	0
Nemaha.....	1	2	0	313	0	0	0	3	0	1	2	0
Neosho, except Chanute.....	0	12	0	1018	1	3	1	0	0	0	21	0
Ness.....	0	1	1	0	2	2	0	0	2	0	6	0
Ness.....	0	0	0	12	0	0	0	0	0	0	0	0
Norton.....	0	3	0	509	0	1	0	0	0	0	7	0
Osage.....	0	6	0	901	6	0	0	0	1	0	20	0
Oshorne.....	0	0	0	612	0	0	0	0	0	18	2	0
Ottawa.....	0	0	0	343	0	2	0	0	0	2	0	0
Pawnee.....	0	2	0	534	3	0	0	0	0	0	7	0
Phillips.....	0	38	0	679	0	0	0	1	0	4	3	0
Pottawatomie.....	0	0	1	759	0	1	0	0	0	1	4	0
Pratt.....	0	4	0	790	9	30	0	0	0	6	11	0
Rawlins.....	0	1	0	497	2	1	0	0	0	0	2	0
Reno, except Hutchinson.....	0	0	1	325	5	1	0	0	0	0	0	0
Republic.....	0	3	2	37	6	3	0	0	12	0	4	0
Rice.....	0	0	0	264	0	0	0	0	3	0	5	0
Riley, except Manhattan.....	0	0	0	188	0	0	0	0	3	2	12	0
Rooks.....	0	1	0	409	3	1	0	0	7	0	3	0
Rush.....	0	0	0	0	1	12	0	4	12	4	13	1
Russell.....	0	3	0	120	1	1	0	0	0	0	2	0
Saline, except Salina.....	0	0	0	283	1	0	0	9	6	0	0	0
Scott.....	0	6	0	250	1	0	0	0	0	0	4	0
Sedgwick, except Wichita.....	0	0	1	598	0	4	0	2	2	0	0	0
Seward.....	0	0	3	0	1	0	0	0	1	0	0	0
Shawnee, except Topeka.....	0	5	0	22	0	0	0	0	0	0	0	0
Sheridan.....	0	5	0	469	2	0	0	0	0	0	0	0
Sherman.....	1	37	4	720	7	10	0	6	31	21	76	0
Smith.....	0	0	0	38	0	0	0	0	0	0	6	0
Stafford.....	0	0	0	40	4	0	0	0	5	0	5	0
Stanton.....	0	1	0	1505	4	2	0	15	39	1	9	0
Stevens.....	0	0	0	263	0	0	0	0	0	2	3	0
Sumner, except Wellington.....	0	3	2	0	0	0	0	0	0	0	0	0
Thomas.....	0	7	3	489	1	0	0	0	1	0	3	0
Trego.....	0	1	0	276	7	0	0	2	1	0	4	0
Wabaunsee.....	0	0	0	29	0	0	0	0	0	0	0	0
Wallace.....	0	0	0	24	0	0	0	0	0	0	0	0
Washington.....	0	2	2	1329	6	0	0	4	6	0	72	0
Wichita.....	0	0	2	0	2	0	0	0	20	0	10	0
Wilson.....	0	0	2	251	0	4	1	0	0	0	2	0
Woodson.....	0	1	1	0	1	0	0	0	0	0	0	0
Wyandotte, except Kansas City.....	0	0	0	130	2	2	0	0	0	0	13	0
Rosedale.....	0	0	0	47	0	1	0	0	0	0	2	0
Lincoln.....	0	0	1	347	1	0	0	0	1	0	3	0
Wichita.....	0	0	0	50	0	0	0	0	0	0	2	0
Wilson.....	34	1	3	920	0	6	0	3	3	48	22	0
Woodson.....	0	1	1	16	5	0	0	0	0	0	7	0
Wyandotte, except Kansas City.....	0	1	4	114	3	3	0	0	0	0	8	0
Rosedale.....	1	8	19	1160	17	176	0	10	5	19	113	1
Lincoln.....	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Amebic dysentery, 1; cancer, 10; chancroid, 14; gonorrhoea, 138; sleeping sickness, 4; syphilis, 91; trachoma, 4.

Report of Division of Water and Sewage.

JANUARY, 1920.

CHAS. A. HASKINS, Chief.

I.

PERMITS ISSUED OR REFUSED FOR WATERWORKS AND SEWERAGE.

Place, Nature of Improvement, and Date.

Cheney. New waterworks plant. Feb. 5, 1920.
 Cheney. New sewer system. Jan. 24, 1920.
 Colby. New sewer system and sewage-disposal plant. Jan. 24, 1920.
 Harper. Sewer extensions. Jan. 16, 1920.
 Smith Center. New sewer system. Jan. 16, 1920.
 Valley Center. New water supply. Jan. 22, 1920.

I-A.

Plans for preliminary reports have been received or conferences have been held with municipal authorities for new work at following places:

Augusta. New source of water supply.
 Aurora. New waterworks.
 El Dorado. New water supply.
 Emporia. Extensions to sewer system.
 Erie. Extensions to water supply.
 Galena. (See November report.)
 Glasco. New sewer system.
 Goodland. New sewer system.
 Greenleaf. Extensions to water supply.
 Hillsboro. New waterworks plant.
 Hugoton. New water supply.
 Madison. New sewer system.
 Ottawa. Extensions to water supply.
 Palmer. New waterworks plant.
 Paola. New water purification plant.
 Peabody. New source of water supply.
 Protection. New sewer system and sewage-disposal plant.
 Scott City. New sewer system.
 Salina. Sewer extensions (see November report).
 Sedgwick. New sewer system.
 Topeka. Extension to water supply.

II.

Record of analyses made in water and sewage laboratory at Lawrence during January:

<i>Source of Sample.</i>	<i>Bacteriological.</i>	<i>Chemical.</i>	<i>Miscellaneous.</i>
City water supply.....	364	19	..
Bottled water.....	3	1	..
Private supplies	8	..	..
Railroad supplies	8	1	..
Ice .....	...	..	10
Chloride determinations .....	...	..	10
Sand analyses .....	...	..	3
	<hr/> 383	<hr/> 21	<hr/> 23

Total number of analyses, 427.

III.

LICENSES ISSUED.

Place, Date, Person or Firm, and Purpose.

Clements, 1-30-20. Hamilton & Zickafosse. Natural ice.
 Eskridge, 1-30-20. Parmiter Bros. Natural ice.
 Green, 1-30-20. O. A. Smith. Natural ice.
 McFarland, 1-30-20. Ringel & Mueller. Natural ice.
 Ozawkie, 1-30-20. Louis Puderbach. Natural ice.
 Seneca, 1-30-20. Otto A. Kelm. Natural ice.
 Waterville, 1-30-20. W. R. Summers. Natural ice.

RAILROAD WATER SUPPLIES.

Anthony, 1-28-20. Kansas Southwestern. Railroad.
 Arkansas City, 1-28-20. Kansas Southwestern. Railroad.
 Arkansas City, 1-28-20. Missouri Pacific. Railroad.
 Arkansas City, 1-28-20. Atchison, Topeka & Santa Fe. Railroad.
 Cedar Vale, 1-29-20. Santa Fe. Railroad.
 Chanute, 1-29-20. Santa Fe. Railroad.
 Cherryvale, 1-29-20. Santa Fe. Railroad.
 Cherryvale, 1-29-20. St. Louis & San Francisco. Railroad.
 Coffeyville, 1-29-20. Santa Fe. Railroad.
 Colony, 1-20-20. Santa Fe. Railroad.
 Conway Springs, 1-28-20. Missouri Pacific. Railroad.
 Emporia, 1-28-20. Santa Fe. Railroad.
 Florence, 1-28-20. Santa Fe. Railroad.
 Greenleaf, 1-6-20. Missouri Pacific. Railroad.
 Herington, 1-28-20. Rock Island. Railroad.
 Highland, 1-28-20. Union Pacific. Railroad.
 Hoisington, 1-28-20. Missouri Pacific. Railroad.
 Iola, 1-29-20. Missouri, Kansas & Texas. Railroad.
 Leavenworth, 1-28-20. Union Pacific. Railroad.
 Leavenworth, 1-28-20. Santa Fe. Railroad.
 Marysville, 1-29-20. Grand Island. Railroad.
 Marysville, 1-29-20. Union Pacific. Railroad.
 Moline, 1-28-20. Santa Fe. Railroad.
 Neodesha, 1-29-20. St. Louis & San Francisco. Railroad.
 Osage, 1-28-20. Santa Fe. Railroad.
 Ottawa, 1-28-20. Santa Fe. Railroad.
 Parsons, 1-29-20. Missouri, Kansas & Texas. Railroad.
 Stafford, 1-28-20. Missouri Pacific. Railroad.

CERTIFICATES REFUSED.

Scott City, 1-28-20. Santa Fe. Railroad.

A County Public Health Nurse Program.

(Abstract from talk given February 24 to League of Women Voters at Faribault by Mary Margaret Muckley, R. N., Northern Division A. R. C.)

A community may be as powerful as its people are physically fit. When we turn the pages of the health volume and look over the various indexes and lists we find a goodly number of epidemics showing up throughout the year; we see that one out of every ten deaths is caused by tuberculosis; that one death in every five is that of a child below the age of five, who might have been saved had the mother been properly instructed in the care of children; that about seventy per cent of the school children have one or more physical defects. We know, too, that thirty per

cent of the young men in the selective draft were rejected on account of some physical defect.

You ask: "How may we improve these conditions and bring about a community which will be physically fit?" Through the adoption of a County Public Health program, whose aim is first, to check the spread of infectious diseases; second, to detect and aid in the correction of physical defects; third, to initiate habits of right living in town and rural districts.

Education is the big factor which helps to make this program a success. It is that which dispels the clouds and clears up the misinformation, misunderstanding and sometimes ignorance, which blocks the progress in developing a better and stronger community, and the best distributor of this education is the Public Health Nurse.

The Public Health Nurse, it has been found, begins her work in the schools; through making a physical inspection of the school child she gains an entrance into the home. The physical inspection consists of testing the hearing and vision, inspecting the teeth and throat, noting whether or not the child is a mouth-breather, also the general appearance of the child in regard to nutrition. When a child is found having a physical defect, a note is sent to the parents regarding the finding. The cases needing immediate attention are followed up at once by calling on the parents to more fully explain the child's condition. Through the nurse's home visits she comes in contact with the child of pre-school age, the adults in the homes, and in most every instance is able to give good advice in promoting the family health.

When the school work is well under way, and especially during the summer months, she begins the tuberculosis field work and child welfare work. In doing tuberculosis work she goes about it in this manner. If the county in which she works has a tuberculosis sanatorium, she gets a list of the names and addresses of those who have been patients at the sanatorium for the last three years. She also secures such a list from the State Board of Health. She calls at these homes and learns about the health of various members of the family, laying especial stress on the importance of a good physical examination of the children, if any in the family, at about six months intervals; that they may be assured they are not carrying with them a tuberculosis infection, which will check good physical development. At the same time, she encourages the ex-patient in keeping up good living habits, and continuing having physical examinations at regular intervals.

Through the nurse's home calls regarding school work, she often comes in contact with individuals who seems to be developing some systematic trouble, and through honest explanation, interests the suffering one in seeing a physician. She calls at these homes from time to time and gives instruction in the care of patients in the home, and the precautions necessary for the avoidance of the disease. Whenever possible, she tries to get those needing sanatorium treatment to such an institution.

The work with the child of pre-school age is carried on in much the same manner. In visiting homes, as a result of her school inspection she

meets the mother and younger children in the family, and gains an opportunity to give the mother many valuable and helpful hints about the feeding, clothing and care of the younger child.

A certain school may be threatened with an epidemic of measles. The nurse, when notified of this, goes to the school and inspects each child, under the direction of the health officer. All children showing symptoms of a disease are excluded from school and the nurse visits the child's home to explain the danger of spreading the disease and the advisability of calling in the family physician.

Another point which I wish to bring out is the nurse's chance of meeting people in groups. By attending farmer clubs, women's clubs, commercial clubs and the various public meetings throughout the county, the nurse gets a place on the program that she may explain the different phases of her work, and give the audience an opportunity to ask questions. Through having as many as possible know about her work, the nurse gets better coöperation and interest.

While the above-mentioned is a heavy program for only one nurse in a county, still much can be accomplished, through adequate transportation, and by making the above program a business proposition. The county may expect the nurse to carry out a County Public Health program to the best of her ability.

The Public Health Nurse looks to the county as her partner. If the work in the county is to be successful, the county must come forward and pool its energy and talent with that contributed by the nurse. In a material line, the nurse may expect that a committee on nursing activities be appointed, to whom she is responsible in reporting and discussing the county work and problems, that she be provided with an office or consultation room, and that they pay her a reasonable salary and afford adequate transportation.

The thing to remember is that while the nurse can do immeasurable good, the county owes her allegiance and coöperation if the best results are to be obtained.

What Kipling said about military victories applies just as emphatically to Public Health victories:

"It is not the guns or armament,
Or the money they can pay,
It's the close coöperation
That makes them win the day.
It is not the individual
Or the army as a whole,
But the everlasting team-work
Of every living soul."

—*The Minnesota Public Health Association Journal.*

Typhoid Fever.

CAUSE OF TYPHOID.

Typhoid fever is a communicable disease. It is produced by a specific microörganism, known as the typhoid bacillus. The growth and development of this germ takes place within the body of the typhoid patient. It is usually found in the discharges of the person having typhoid fever from the time (or soon after) infection until convalescence is thoroughly established; it has been recently proven beyond doubt that many typhoid cases continue to discharge virulent germs in the feces and urine (particularly the latter) for weeks and even months after the patient seems entirely well. When these germs find their way into the body of a person who is susceptible, the disease is developed in some form between that of a so-called "walking" case to the most malignant fatal type.

It was formerly believed that typhoid fever was developed from unsanitary conditions, but this view is no longer held by scientists. It is necessary that the specific germ of the disease be taken into the system before a true case of typhoid fever obtains. These germs, of course, come from some prior case.

HOW TYPHOID FEVER IS SPREAD.

A polluted water supply is the most frequent medium for the spread of typhoid fever. All of the great epidemics have been traced to this source of infection. Water may appear perfectly clear and sparkling, with a pleasant taste and without odor, and yet contain typhoid germs. The germs find their way into the water in many ways. The excretions of a typhoid case are deposited on the ground in such a way that it is washed into a stream or well, or the sewage from faulty house drains or sewer systems may find its way into near-by wells or cisterns, thus polluting the water supply. Seepage from the privy vaults and cesspools, which finds its way into the underground water stratum, has been known to pollute the water of near-by wells.

A water supply, whether well, spring, stream, reservoir or pond, that is polluted with human excreta, solid or fluid, is a dangerous supply, because of the liability of typhoid infection at any moment.

The great epidemic of typhoid fever at Plymouth, Pa., which resulted in the sickness of 1,104 persons and the death of 114, with an outlay in money of \$67,100.11, was traced to the use of water polluted by the fecal discharges of one imported case of the disease. The more recent epidemics at Maidstone, England, Butler, Pa., and Ithaca, N. Y., were traced to similar causes.

Another source of typhoid fever is an infected milk supply, although it is well to bear in mind that the milk is never infected when it comes from the cow. It is always infected by man. This infection may take place through the addition of polluted water, or by washing the cans and other utensils with such water, or by milkers or others who handle the milk whose hands or clothing may be infected by the typhoid germs, or by infected flies falling into the milk. When the milk is once infected

the germs multiply very rapidly, as milk is an excellent culture medium, yet the milk does not become sour from this cause or in any other way give the least evidence of the presence of the germs. No milk should be sold from a dairy, farm, or house where there is a case of typhoid fever.

Ice may be another source of typhoid infection. Ice taken from a sewage-polluted river or lake, or ice manufactured from sewage-polluted water, is unsafe to use. The germs of typhoid fever are not destroyed by freezing.

Flies are also carriers of infection. The common house fly is now known to be the disseminator of a number of our infectious diseases, principally those of typhoid fever and tuberculosis. It is probable that the majority of cases of typhoid fever in country districts, and in small towns that do not have a common water supply or a common milk supply, are the results of fly infection. The ordinary privy vault of the country and small towns is open to the access of the fly, and where the unsterilized excretions of the typhoid case are deposited therein, or if they are thrown upon the ground, as is frequently the case, the flies are attracted to this material, and carry upon their legs and wings, as well as in the fly-specks which they deposit upon things, germs of the disease. Thus foods and drinks become infected through the medium of the ever present house fly.

Privy vaults should be properly constructed, deep enough and tight enough to exclude the fly. The houses should be screened, and the breeding place of the fly, which is the manure piles, should be disposed of at frequent intervals. You will be surprised at the reduction of the number of flies, if you and your neighbors keep the manure piles scattered.

Personal contact has been shown to be a means of spreading the disease. In other words, the disease may be transmitted through infected clothing, bedding, and eating and drinking utensils. This naturally suggests the importance of a most thorough disinfection of persons and things having any relation to a typhoid-fever patient.

It has been said that oysters and other shellfish that come from sewage-polluted waters and are eaten uncooked have transmitted the disease. It is probable that the infection of this class of food products usually takes place after the oysters and fish are taken from their natural habitat. The usual method of handling this class of food is far from being what might be considered sanitary.

Typhoid infection has doubtless been occasionally spread through vegetables grown upon infected soil and eaten raw. The practice of using human excreta as fertilizing material, as has been done at various times and places, is to be deprecated.

HOW TYPHOID GERMS ARE SCATTERED.

The time between the entrance of the typhoid germ into the individual and the development of the first symptoms of the disease is from ten to twelve days. It is probable that during this time, or at least during the latter part of the time, the patient is daily excreting the germs of the disease in great numbers. Thus there is being unknowingly scattered infection wherever he may go. Then there are the so-called mild or

walking cases, in which the patient is unaware of any grave disease, and, being under no restraint, goes about his usual avocation. As such cases often continue for weeks and with no precautions taken, they may cause a wide distribution of the typhoid germs.

A third way is where the infection is spread by patients who have apparently recovered from the disease, but whose excretions still continue to contain countless numbers of the germs. It has been recently demonstrated that such cases are of frequent occurrence. It will therefore be seen that the typhoid fever germ is doubtless very widely scattered, and thus we may account for many of the sporadic cases that occur without apparent cause.

The typhoid germ is nearly always taken into the system with food or drink, especially the latter. It multiplies enormously in the intestinal canal, and is eliminated from the body in the stools and urine. This fact is of the utmost importance in considering measures of prevention.

The germ can live for some time after it leaves the body—just how long is unknown. In soil containing considerable animal and vegetable material it may remain alive for several months. Some soil possesses excellent filtering properties and removes all the germs from water passing through it. Other soils fail to do this.

A well with a privy or house drain in close proximity is always more or less dangerous, and many typhoid cases have been traced to this source of infection. Often the privy or barnyard is upon higher ground than the open well, and thus during hard rains surface contamination may be washed into the well.

The practice of throwing urine upon the ground is an exceedingly dangerous one. It is only a few years since that we have known that the germs of typhoid fever are usually present in the urine of a person suffering from that disease. They were formerly thought to be in the feces only, so that while the stools were carefully disinfected no attention was paid to the urine. This was often emptied near the well where the vessel was washed. *We must now consider that the urine, from its liquid character, is even more dangerous than the stools.*

ANTITYPHOID VACCINATION.

The protective value of antityphoid vaccination is no longer open to question. No more definite test could possibly have been given than that afforded by the recent war emergency, a test by millions. No better comparison was ever offered than the comparison between the awful typhoid mortality in our troops in the Spanish-American war, and the light incidence of typhoid in the far greater war from which we have just emerged, triumphant over noxious germs as well as noxious Germans.

War observation has taught us that vaccination is not a substitute for sanitary precautions. It has demonstrated the possibility that men fully and properly vaccinated may yet succumb to typhoid invasion. The probable explanation is that in such cases the victim is overwhelmed by infective material in enormous doses. We give point to the fact merely as a warning, lest any one be inclined to the view that the protection of vaccination warrants neglect of general sanitation. It does not detract

from the argument that army antityphoid vaccination has fully demonstrated its value, for the volume of proof is still overwhelming. Furthermore, the performance of the operation on such a scale has amply demonstrated its safety.

The Kansas State Board of Health therefore enjoins upon all physicians, and especially upon city and county health officers, the duty of urging the people of Kansas to take advantage of this great means of protection. They should be taught that it is safe, efficient and economical, that as insurance against our most deadly disease it has no equal. Its administration causes but little pain, and, if made in the evening, the patient is usually able to resume ordinary occupations on the following day, though exposure to hard work in the heat of the sun should be avoided for thirty-six hours. It does not cause a sore arm, though there may be a slight degree of swelling and redness around the site of inoculation and the neighboring lymphatics for a short time. But all of these possible sequelæ are trivial matters considering the importance of the objective.

CARE OF TYPHOID PATIENT.

A typhoid fever patient should be placed, if possible in a large, airy room without carpet or unnecessary furnishings. Free ventilation should be insisted upon. If there is diarrhea, the mattress should be protected with a rubber sheet, placed under the linen sheet. The discharges from the patient should be received in a vessel containing some disinfectant solution, such as that provided by freshly slaked lime, using one part of the freshly slaked lime to four parts of water, using a liberal quantity and mixing thoroughly with the excretions by stirring. A solution of chlorid of lime or carbolic acid may be used instead, if desired. After being allowed to stand for a while, the contents of the vessel may then be thrown into the water-closet or buried at a considerable distance from any well or spring. Sputum from the patient should also receive the same care in thorough disinfection.

The utmost cleanliness of the patient and his surroundings should be the rule. The body clothing of the patient and bed linen should be changed daily, or oftener if soiled, and, as soon as removed, immersed in a disinfecting solution to remain for at least one-half hour, then boiled or plunged into boiling water for fifteen minutes.

The patient should have for his own exclusive use eating utensils and other paraphernalia to be used only in the sick-room. These should never be washed in the same pan or with the same dishcloth used for other dishes. They should first be thoroughly boiled, then carefully washed, and kept separate from the other household utensils.

All food brought into the sick-room and not consumed by the patient should be burned. Neither the nurse nor any other member of the family should be permitted to eat of any portion of the food remaining.

Flies should be carefully screened from all parts of the house, especially the sick-room, and should never be permitted to come in contact with the discharges from the bowels or bladder or with sputum of a typhoid-fever patient.

The hands of the attendant should be immediately washed and disinfected after contact with the patient and his clothing. Probably the best disinfectant for this purpose is a solution of corrosive sublimate, consisting of one gram to a gallon of water.

Unnecessary visitors should be excluded from the sick-room. With proper disinfection of hands and general cleanliness, the nurse or attendant may take his meals at the household table. At all events, they should not eat in the sick-room. Doubtful cases of typhoid fever should be treated in the same manner as typhoid cases, in order to secure efficient disinfection and to prevent the spread of the disease.

Typhoid fever is not contagious, in the sense commonly understood, and if the precautions above indicated are faithfully and intelligently carried out a case may be treated in any family or community with perfect safety. The same precautions should be observed in dysentery and all other diarrheal diseases, including summer complaint in children.

NOTIFICATION—DUTIES OF BOARD OF HEALTH.

Every case of typhoid fever must be reported promptly to the local health officer. Physicians are required to render such reports, and a like responsibility rests upon some member of the household if no physician is in attendance.

Upon receipt of notice the local health officer should:

1. Investigate the probable source and mode of origin of the disease. If probably from a contaminated well or general water supply, see that measures are taken, by stopping its use, by boiling it, or otherwise, to prevent further cases being caused in the same manner. If connected with the sewer, see that the plumbing is in good order and all fixtures properly trapped.
2. Order and enforce the distinction of all discharges from the bowels and bladder of patients sick with typhoid fever. It is safest that the discharges of all persons who have diarrhea shall be disinfected.
3. Disinfect the contents of the privy on the premises, or any other that has been used by the patient.
4. Order and secure the disinfection of all articles of clothing or bedding that have been soiled by discharges from the patient.
5. Secure the coöperation of the people in the prevention of this disease by teaching them its modes of spreading, the best methods for its prevention, and the greater importance of efforts for its prevention in times of drought and low water in wells.
6. See that the premises are properly disinfected after the death or recovery of the patient.
7. See that each family is furnished with a pamphlet on prevention.

DISINFECTANTS.

For a free and general use in privy vaults, sewers, sink drains, refuse heaps, stables, and wherever else the odor of the disinfectant is not objectionable, a solution of chlorid of lime may be used. This is one of the cheapest and most effective disinfectants and germicides available for general use. Chlorid of lime ought to be obtained anywhere for ten cents a pound. This is one of the best disinfectants known.

For daily use in connection with a case of typhoid fever there are no better disinfectants than chlorid of lime and the milk of lime, formulas for which are given below. The milk of lime has the decided advantage of not having an objectionable odor.

At the proper time, general disinfection of the sick-room should be carried out by the local board of health.

CHLORID OF LIME SOLUTION.

Chlorid of lime (bleaching powder), one pound; water, three gallons. Mix. Cost, about three cents per gallon.

Care should be taken to obtain *fresh* chlorid of lime.

This solution is so cheap that it can be used with great freedom, and is one of the best disinfectants known. A quart or more per day may be used in an offensive vault. It may be used in a sprinkler in stables and elsewhere. In the sick-room it may be used in vessels, cuspidors, etc. Sheets and other clothing used by the patient may be immersed in a pail or tub of this solution, diluted (one gallon of solution to ten of water), for two hours, or till ready for the wash-room or laundry. This solution is nonpoisonous and does not injure white clothing.

It may also be used for washing the hands or other parts of the body which may have been exposed to infection from excreta, etc.

MILK OF LIME (QUICKLIME).

Slake a quart of freshly burnt lime (in small pieces) with three-fourths of a quart of water—or, to be exact, 60 parts of water by weight with 100 of lime. A dry powder of slaked lime (hydrate of lime) results. Make milk of lime not long before it is to be used by mixing one part of this dry hydrate of lime with eight parts (by weight) of water.

Air-slaked lime is worthless. The dry hydrate may be preserved some time if it is enclosed in an air-tight container. Milk of lime should be freshly prepared, but may be kept a few days if it is closely stoppered.

Quicklime is one of the cheapest of disinfectants. This solution can take the place of chlorid of lime, if desired. It should be used freely, in quantity equal in amount to the material to be disinfected. It can be used to whitewash exposed surfaces, to disinfect excreta in the sick-room or on the surface of the ground, in sinks, drains, stagnant pools, etc.

Much of the so-called disinfection practiced in families is wholly inefficient and useless. The burning of coffee, tar, sulphur, or other substance in the sick-room or in any other part of the house or premises in the presence of the patient or other person operates, at most, only as a deodorizer, and does not destroy the germs of the disease.

It should also be known that many of the preparations offered for sale as disinfectants, germ killers, etc., are worthless, or nearly so, and should never be relied upon.

HEALTH EPIGRAMS.

If some people were as much afraid of flies as they are of bad water, there would be less typhoid

Good water is more to be prized than rubies, and clean hands are better than much fine gold.

The fly has small feet, but a million typhoid germs can ride comfortably on one of them.

If you nurse a typhoid case, wash your hands and watch your mouth.

A sanitary privy costs ten dollars; a case of typhoid costs a hundred. You will seldom have both.

The season's best fashion is to be rendered immune against typhoid fever by "antityphoid" inoculation.

Copies of this bulletin can be had upon application to the Secretary of the State Board of Health, Topeka, Kan.

Storing Canned Foods in the Open Can.

The result of an investigation made by the American Cannery Association of the action of canned foods upon the opened container is that while the actual changes in food induced by such contact are negligible, yet the practice on the whole is to be condemned.

Dr. W. D. Bigelow, Chief Chemist of the Association, undertook the investigation for the reason that many stories were common to the effect that leaving food in the opened can would result in the production of poisonous substances. It is a known fact that poisoning does sometimes occur as a result of bacterial action and consequent production of toxic substances which have been referred to as "ptomaines." Dr. Bigelow states that the composition of the food container has no influence or relation to bacterial action in foods and subsequent food poisoning.

The other form of poisoning from foods results when poisonous metals are dissolved by the action of the food on the container and then consumed. The investigation by Dr. Bigelow shows that there is an appreciable increase in tin content in such foods as pineapples and apples or acid materials. Other foods, such as pumpkin, tomatoes, string beans, corn and kraut showed no increase in this respect.

The inner surface of cans used in packing food is treated with a shellac which is insoluble in ordinary food juices. Flaws may be present and acid foods will then be able to attack the metal container, or after opening, fermentation results in the production of such acids. However, by the time any amount of acid is produced the food is spoiled.

Public eating places found to be using metal containers for the storing of foods should be ordered by health officers to discontinue the practice. It is neither an economical nor desirable method of handling food. Earthenware or porcelain jars are well adapted for storing of foods after removal from cans. Such containers are practically unbreakable and are easily cleaned and sterilized. Like milk cans, such utensils should be sunned and aired after thorough washing in order that odors may be removed.

A COVENANT.

W. A. EVANS, M. D.

I pledge myself to so live that I may be well, and to this end I agree to abide by these, My Laws:

I accept the stewardship of my body, promising not to violate the rights thereof by acts of omission or commission.

I will allot a portion of each day for work, another portion for play, and another portion for rest, and I will give to each appropriate energy and thoughtfulness.

I will develop for myself those habits which make for health, eschewing all those habits and contending against all those customs which harm me and my race.

I will avoid all poisons of whatsoever kind.

**I will do unto others as I would have others do unto me.
I will not expose others to contagion borne by me, and I would have them in a like manner protect me.**

I will respect the rights of others to have sunlight, clean air, clean water, and healthful food.

I will eat as my work demands, and will not overeat in response to appetite or whim.

I will make use of my muscles in work or play during some part of each day.

I will devote to sleep, not only the required hours, but keep my mind in that state of quiet calm which is necessary for recuperation and rest.

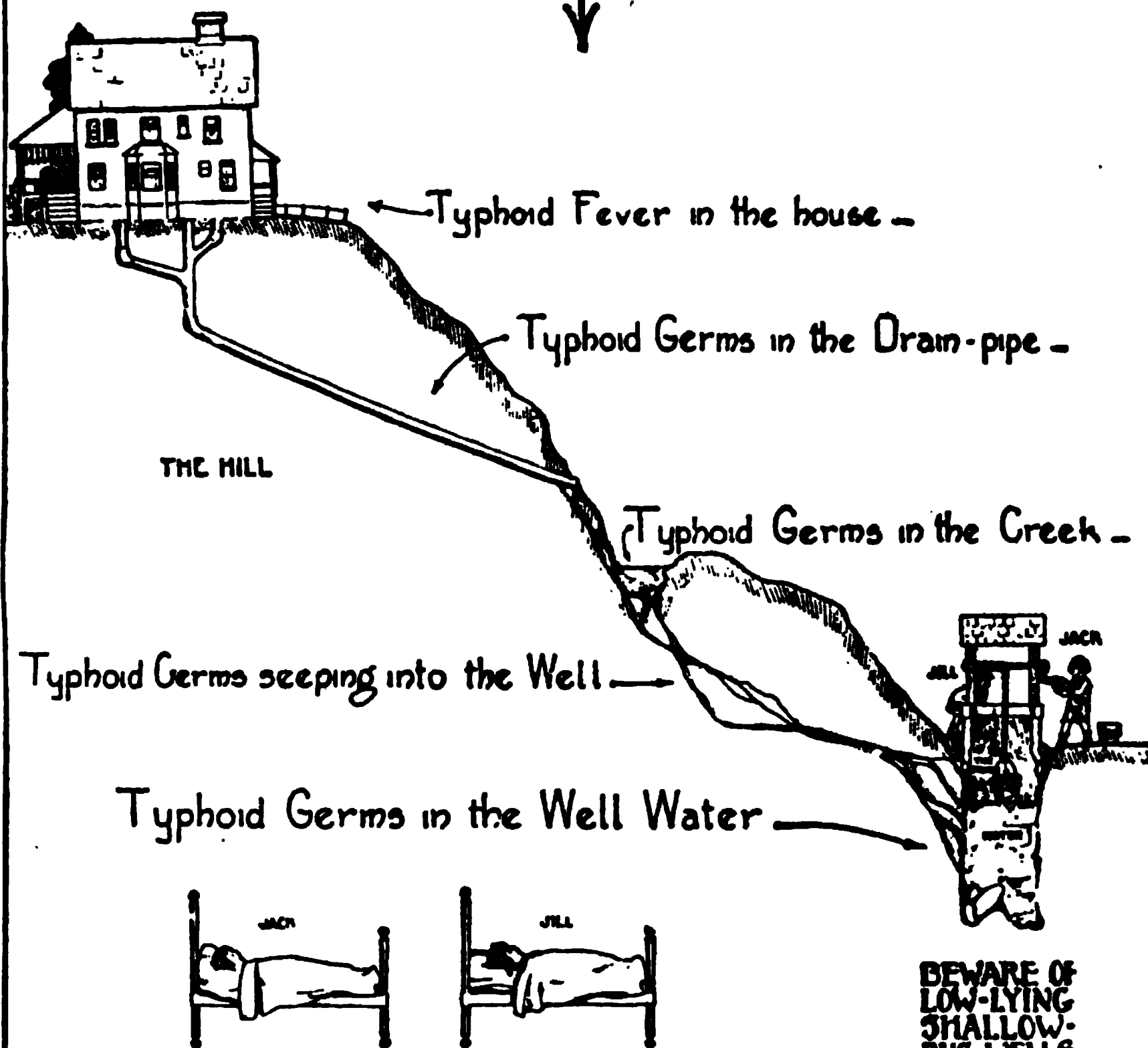
I will not worry. Whatever fortune may bring me I will accept with calmness, preserving my equanimity alike in seasons of adversity and of plenty.

JACK AND JILL.

JACK AND JILL
WENT DOWN THE HILL
TO GET A DRINK OF WATER

JACK FELL SICK
OF TYPHOID, QUICK.
AND JILL CAME FOLLOWING AFTER!

- AND THIS IS THE REASON WHY



TYPHOID GERMS IN JACK AND JILL !

BEWARE OF
LOW-LYING
SHALLOW-
DUG WELLS

BULLETIN

OF THE

Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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GARDEN MAXIMS.

Be sure you're right, then hoe ahead—
A hoe in the hand is worth two in the shed.

Spare the spade and spoil the soil.

Ground rightly prepared is half the battle.

Thrice armed is he who hath his garden planted.

Early to plant and early to hoe,
Will cause your garden to blossom and grow.
—*The Chicago Bulletin.*

If at first your seed won't grow,
Sow, sow again!

Never put off until to-morrow
What you can hoe to-day.

Blessed are the gardeners, for they
Reduce the high cost of living.

There is no substitute for whole, clean milk.

Merchants! The egg-candling regulation is effective May 15.

Sanatorium treatment for incipient pulmonary tuberculosis almost assures a favorable
result.

Fundamentally, the resistance of the individual and the strength of the nation is con-
ditioned on normal nutrition.

MORBIDITY REPORT FOR MARCH, 1920.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Influenza.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Polio-myelitis (epidemic).	Other Diseases (see Addenda).
THE STATE.....	8	500	130	6,666	346	612	16	218	302	179	225	14	0	351
Allen, except.....	0	1	0	58	3	1	0	0	0	0	0	0	0	0
Iola.....	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Anderson.....	0	0	0	11	0	0	0	0	0	0	1	0	0	0
Atchison, except.....	0	1	0	40	6	1	0	0	0	0	0	0	0	0
Atchison city.....	0	5	0	2	2	0	0	0	0	0	0	0	0	0
Barber.....	0	0	0	75	8	0	0	0	0	0	0	0	0	0
Barton, except.....	0	0	1	46	2	6	0	0	0	0	0	0	0	0
Great Bend.....	0	0	1	0	1	0	0	0	0	0	1	0	0	0
Bourbon, except.....	0	0	0	5	0	1	0	0	0	0	0	0	0	0
Fort Scott.....	0	10	0	17	0	15	0	0	5	1	2	0	0	0
Brown.....	0	9	0	166	10	0	0	2	2	1	0	0	0	1
Butler, except.....	0	16	0	53	9	18	1	7	0	0	8	0	0	1
Augusta.....	0	1	1	0	1	1	0	0	0	0	0	0	0	0
El Dorado.....	0	81	2	0	3	10	0	7	3	1	1	0	0	0
Chase.....	0	1	0	64	3	32	0	26	0	0	1	0	0	3
Chautauqua.....	0	0	0	5	3	0	0	0	0	1	1	0	0	2
Cherokee, except.....	0	3	0	212	4	8	0	0	0	0	0	0	0	3
Galena.....	0	3	0	0	0	0	0	0	0	0	1	0	0	3
Cheyenne.....	0	0	0	13	0	1	0	0	0	0	1	0	0	0
Clark.....	0	0	0	65	2	0	0	0	0	0	1	0	0	0
Clay.....	0	0	0	97	4	0	0	0	2	1	1	0	0	0
Cloud, except.....	0	0	0	9	4	1	0	0	1	1	2	2	0	0
Concordia.....	0	1	0	0	0	0	0	0	0	0	1	0	0	1
Coffey.....	1	1	0	59	11	0	0	3	0	0	2	0	0	0
Comanche.....	2	0	0	103	0	0	0	3	0	0	2	0	0	1
Cowley, except.....	0	0	0	125	5	3	0	0	0	0	2	0	0	0
Arkansas City.....	0	1	0	0	4	2	0	0	7	0	0	0	0	4
Winfield.....	0	3	0	0	2	0	1	1	0	0	0	0	0	2
Crawford, except.....	0	6	4	300	0	5	0	2	2	5	3	1	0	5
Pittsburg.....	0	14	1	10	4	0	0	0	1	0	0	0	0	1
Decatur.....	0	0	0	67	0	0	0	0	0	2	1	0	0	0
Dickinson.....	0	15	3	230	6	11	0	16	1	4	2	0	1	1
Doniphan.....	0	6	0	93	10	1	0	8	1	0	2	0	0	0
Douglas, except.....	0	0	1	61	1	2	0	2	1	7	0	0	0	0
Lawrence.....	0	1	0	0	0	1	0	0	1	10	0	1	0	1
Edwards.....	0	0	0	4	1	0	0	0	0	0	2	0	0	0
Elk.....	0	0	0	10	0	0	0	0	0	0	0	0	0	0
Ellis.....	0	2	4	0	0	0	0	0	4	0	2	1	0	1
Ellsworth.....	0	0	0	175	0	3	0	0	4	2	6	0	0	1
Finney.....	0	18	0	22	3	0	0	0	2	7	1	0	0	0
Ford, except.....	0	7	0	73	12	13	0	1	0	0	2	0	0	0
Dodge City.....	0	4	1	0	1	4	0	0	0	0	2	0	0	0
Franklin, except.....	0	2	0	0	1	1	3	0	0	0	0	0	0	0
Ottawa.....	0	2	0	0	1	3	0	0	0	0	0	0	0	0
Geary, except.....	0	0	0	18	1	0	0	0	4	0	4	0	0	0
Junction City.....	0	0	2	0	1	1	1	0	6	0	6	0	0	0
Gove*.....	0	8	0	317	1	0	0	0	0	3	0	0	0	0
Graham.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant.....	0	2	0	42	1	0	0	0	2	0	0	0	0	1
Gray.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greeley.....	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Greenwood.....	0	0	0	145	0	8	0	0	6	0	6	0	0	0
Hamilton.....	0	0	0	28	0	0	0	0	0	0	1	0	0	0
Harper.....	1	1	1	73	2	1	0	3	0	1	2	0	0	1
Harvey, except.....	0	6	0	48	0	0	0	0	0	1	0	0	0	0
Newton.....	0	1	5	0	4	0	0	0	2	0	0	0	0	0
Haskell.....	0	0	0	3	0	0	0	0	0	0	0	2	0	0
Hodgeman.....	0	0	0	135	0	0	0	0	0	0	0	0	0	0
Jackson.....	0	1	4	22	2	7	0	0	2	0	0	5	0	0
Jefferson.....	0	7	0	81	3	1	0	0	0	0	1	0	0	0
Jewell.....	0	13	0	293	1	0	0	10	0	2	1	0	0	3
Johnson.....	0	1	0	9	6	14	0	16	0	0	3	0	0	0
Kearny.....	0	0	0	11	0	0	0	0	1	0	6	0	0	0
Kingman.....	0	1	2	258	1	0	0	0	4	0	4	0	0	0
Kiowa.....	0	1	0	151	2	0	0	0	0	0	0	0	0	0
Labette, except.....	0	2	0	20	0	0	0	0	0	0	0	0	0	0
Parsons.....	0	9	7	6	2	0	0	0	2	0	2	0	0	14
Lane.....	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except..	0	0	4	6	0	0	0	0	0	0	0	0	0	10
Leavenworth city..	0	0	2	3	1	8	0	0	2	0	1	0	0	13

MORBIDITY REPORT FOR MARCH, 1920—Concluded.

	Other Diseases (see Addenda).	Poliovirus (epidemic).	Meningitis (epidemic).	Pneumonia (acute lobar).	Mumps	Chickenpox	Whooping Cough	German Measles (rubella)	Measles (morbilli)	Scarlet Fever	Influenza
	0	0	0	2	4	0	0	0	0	4	22
	0	0	0	2	0	0	0	0	1	0	40
	0	0	0	0	0	0	0	0	0	2	0
	0	0	0	0	0	0	0	0	0	0	35
	0	0	0	0	0	0	0	0	0	1	0
Marshall	0	0	0	0	0	0	0	0	0	4	142
McPherson	0	0	0	0	0	0	0	0	0	4	96
Meade	0	0	0	0	0	0	0	0	0	4	0
Miami	0	0	0	0	0	0	0	0	0	0	1
Mitchell	0	0	0	0	0	0	0	0	0	0	95
Montgomery, except	0	0	0	0	0	0	0	0	0	0	43
Coffeyville	0	0	0	0	0	0	0	0	0	0	57
Independence	0	0	0	0	0	0	0	0	0	7	53
Morris	0	0	0	0	0	0	0	0	0	1	0
Morton	0	0	0	0	0	0	0	0	0	2	14
Nemaha	0	0	0	0	0	0	0	0	0	5	4
Neosho, except	0	0	0	0	0	0	0	0	0	3	18
Chanute	0	0	0	0	0	0	0	0	0	1	21
Ness*	0	0	0	0	0	0	0	0	0	2	0
Norton	0	0	0	0	0	0	0	0	0	1	143
Osage	0	0	0	0	0	0	0	0	0	3	31
Osborne	0	0	0	0	0	0	0	0	0	0	155
Ottawa	0	0	0	0	0	0	0	0	0	0	60
Pawnee	0	0	0	0	0	0	0	0	0	1	25
Phillips	0	0	0	0	0	0	0	0	0	1	21
Pottawatomie	0	0	0	0	0	0	0	0	0	0	52
Pratt	0	0	0	0	0	0	0	0	0	4	49
Rawlins	0	0	0	0	0	0	0	0	0	6	105
Reno, except	0	0	0	0	0	0	0	0	0	4	5
Hutchinson	0	0	0	0	0	0	0	0	0	4	5
Republic	0	0	0	0	0	0	0	0	0	1	37
Rice	0	0	0	0	0	0	0	0	0	6	383
Riley, except	0	0	0	0	0	0	0	0	0	1	20
Manhattan	0	0	0	0	0	0	0	0	0	1	0
Rooks	0	0	0	0	0	0	0	0	0	0	48
Rush	0	0	0	0	0	0	0	0	0	0	73
Russell	0	0	0	0	0	0	0	0	0	2	123
Saline, except	0	0	0	0	0	0	0	0	0	1	2
Salina	0	0	0	0	0	0	0	0	0	5	0
Scott	0	0	0	0	0	0	0	0	0	0	11
Sedgwick, except	0	0	0	0	0	0	0	0	0	7	8
Wichita	0	0	0	0	0	0	0	0	0	4	2
Seward	0	0	0	0	0	0	0	0	0	1	0
Shawnee, except	0	0	0	0	0	0	0	0	0	1	37
Topeka	0	0	0	0	0	0	0	0	0	4	41
Sheridan	0	0	0	0	0	0	0	0	0	0	23
Sherman	0	0	0	0	0	0	0	0	0	0	15
Smith	0	0	0	0	0	0	0	0	0	0	166
Stafford	0	0	0	0	0	0	0	0	0	9	16
Stanton	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	2	0
Sumner, except	0	0	0	0	0	0	0	0	0	12	267
Wellington	0	0	0	0	0	0	0	0	0	1	0
Thomas	0	0	0	0	0	0	0	0	0	0	35
Trego	0	0	0	0	0	0	0	0	0	1	0
Wabaunsee	0	0	0	0	0	0	0	0	0	5	27
Wallace*	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	27
Wichita	0	0	0	0	0	0	0	0	0	0	4
Wilson	0	0	0	0	0	0	0	0	0	3	67
Woodson	0	0	0	0	0	0	0	0	0	2	18
Wyandotte, except	0	0	0	0	0	0	0	0	0	1	5
Kansas City	0	0	0	0	0	0	0	0	0	18	26
Rosedale	0	0	0	0	0	0	0	0	0	0	0

* No report

Other communicable diseases: Actinomycosis, 1; cancer, 15; chancre, 5, erysipelas, 6; gonorrhoea, 142; pellagra, 17; syphilis, 158; trachoma, 12.

The Eighth Annual School for Health Officers and Public Health Nurses.

The eighth annual school for health officers and public-health nurses will be held at the clinical department of the school of medicine, Bell Memorial Hospital, Rosedale, Kan., beginning Monday, May 10, and concluding Friday evening, May 14.

The forenoons will be devoted by health officers and physicians to clinics at the Bell Memorial Hospital and Dispensary.

Public-health nurses will hold their sections on the forenoons of Monday, Tuesday, Wednesday, Thursday and Friday.

The afternoons will be devoted exclusively to public-health work, in which the health officers and public-health nurses join in a general session.

All physicians and nurses in Kansas are invited to attend.

There are no fees.

The program follows:

CLINICAL PROGRAM.*

MONDAY.—*Hospital*, Medicine, Dr. Murphy; *Dispensary*, Ophthalmology, Dr. Curran.

TUESDAY.—*Hospital*, Medicine, Dr. Bohan; *Dispensary*, Surgery, Dr. Hurtzler.

WEDNESDAY.—*Hospital*, Surgery, Dr. Sudler; *Dispensary*, Ophthalmology, Dr. Curran.

THURSDAY.—*Hospital*, Otorhinolaryngology, Dr. Hall; *Laboratory*, Dermatology (Lantern Slides), Dr. Sutton.

FRIDAY.—*Hospital*, Gynecology, Dr. Guffey; *Dispensary*, Ophthalmology, Dr. Curran.

MONDAY, MAY 10.

1:30 p. m. Dr. T. D. Tuttle, "The Endemic Index."
Epidemiologist State Board of Health.)

2:30 p. m. Dr. E. S. Williams, "The Principles of Preventive Medicine."
State Health Commissioner, Virginia.

3:30 p. m. Dr. Thomas Parran, "County Health Administration."
U. S. P. H. S.

4:30 p. m. Prof. C. A. Haskins, "Sewage Purification."
Chief Engineer State Board of Health.

TUESDAY, MAY 11.

1:30 p. m. Dr. Thomas Parran, "Child Hygiene."
U. S. P. H. S.

2:30 p. m. Dr. E. S. Williams, "Special Problems of Rural Sanitation."

3:30 p. m. Prof. C. A. Haskins, "Water Purification."

4:30 p. m. S. J. Crumbine, M. D. Round table.
State Health Officer.

* NOTE.—The public health laboratory, under the direction of Doctor Black will be open from eleven to twelve a. m. Tuesdays and Thursdays for demonstration and instruction.

1:30 p. m. Dr. E. S. Williams, "Discussion of Methods of Sewage Disposal."
2:30 p. m. Dr. F. B. Sherbon, "Infant Mortality."
3:30 p. m. Dr. W. R. Wahl, "Immunity."
4:30 p. m. Dr. Thos. Parran, "Milk and Public Health."

1:30 p. m. Dr. E. S. Williams, "Plan of Campaign for Rural Sanitation."

2:30 p. m. Dr. Thos. Paran, "Venereal Disease Control."

3:30 p. m. Dr. S. J. Crumbine, Round Table.

4:00 p. m. Dr. Chas. H. Lerrigo, "The Use of Mortality and Morbidity Statistics in Public Health Work."

1:30 p. m. Dr. Thos. Parran, "Popularizing Public Health."

2:30 p. m. Dr. E. S. Williams, "How to Compensate for the Shortage of Doctors in Rural Districts."

3:30 p. m. Dr. B. K. Kilbourne, "The Health Officer's Duties in Venereal Disease Control."

4:30 p. m. Dr. N. F. Ockerblad, "Venereal Disease Clinic."

8:30 a. m. Registration, Bell Memorial Hospital, Rosedale.

9:00 a. m. "The Duties of the Public Health Nurse,"
Miss Laura Neiswanger.
State Supervisor Red Cross Nursing.

10:00 a. m. "First Period of Short Course in School Nursing,"
Miss Anna L. Stanley.
Director, Public Health Nursing, Southwest Division,
American Red Cross, St. Louis.

11:00 a. m. "Round Table on Nursing Problems," conducted by
Mrs. Virginia K. Kimble.
State Supervisor, Public Health Nursing,
Kansas State Board of Health.

9:00 a. m. "The Kansas Child Welfare Survey," Dr. Florence B. Sherbon.
Chief, Division of Child Hygiene, Kansas State Board of Health.

10:00 a. m. "Second Period of Short Course in Public School Nurs-
ing" (Demonstration in Rosedale Public School),
Miss Anna L. Stanley.

11:00 a. m. Round Table—"Nursing Problems," conducted by
Miss Laura Neiswanger.
State Supervisor Red Cross Nursing.

9:00 a. m. "Why, How and When to Hold Milk Demonstrations,"
Miss Rena Fabian.
Specialist in Milk Utilization, K. S. A. C.

9:30 a. m. "The Work of the Junior Red Cross"... Mrs. E. R. Kroeger.
Division Director, Junior Membership, Southwest Division,
American Red Cross, St. Louis.

THURSDAY, MAY 13.

- 10:00 a. m. "Third Period of Short Course in School Nursing,"
Miss Anna L. Stanley.
- 11:00 a. m. Round Table—"School Nursing," conducted by
Miss Anna L. Stanley.

FRIDAY, MAY 14.

- 9:00 a. m. "Rural Extension Work of the Kansas State Agricultural College".....Mrs. Mary M. McFarlane.
Home Economics, Rural Extension Work, K. S. A. C.
- 9:30 a. m. "Rural Extension Work of the Kansas State Agricultural College".....Miss Frances L. Brown.
Home Nursing, Rural Extension Work, K. S. A. C.
- 10:00 a. m. "Fourth Period of Short Course in School Nursing,"
Miss Anna L. Stanley.
- 11:00 a. m. Venereal Disease Clinic for Women,
Prof. N. F. Ockerblad, M. D.
Dispensary Building.

Report of Division of Water and Sewage, February and March, 1920.

CHAS. A. HASKINS, Chief.

PERMITS ISSUED OR REFUSED FOR WATERWORKS AND SEWERAGE.

I.

Place, Date, and Nature of Improvement.

- Canton. 2-27-20. New waterworks plant.
Cedar Vale. 3-25-20. Sewer system and disposal plant.
Courtland. 3-2-20. Waterworks plant.
Enterprise. 3-29-20. Waterworks extensions.
Glasco. 3-22-20. Sewer extensions.
Paola. 3-5-20. Water purification plant.
Sedgwick. 2-23-20. Sewer system.
Wichita. 3-16-20. Sewer extensions.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

- Abilene. Waterworks extensions.
Arcadia. New waterworks.
Augusta. New source of supply.
Aurora. New waterworks.
Douglass. New source of supply.
El Dorado. New source of supply. Bond election in April.
El Dorado. New sewage disposal plant.
Emporia. New sewage disposal plant bonds carried in April.
Erie. New source of water supply.
Galena. New source of water supply.
Goodland. New sewer system.
Greenleaf. New source of water supply.
Haven. New water supply.
Hillsboro. New water supply.
Hugoton. New water supply.
Independence. Sewer extensions.
Madison. New sewer system.
Manhattan. Water softening and iron removal plant.
Mound Valley. New waterworks plant.

Ottawa. Extensions to waterworks.
 Palmer. New waterworks plant.
 Preston. New waterworks plant.
 Peabody. New source of water supply.
 Protection. New sewer system.
 Rocky Ford Milling & Power Co. New waterworks plant.
 Scott City. New sewer system.
 Salina. Sewer extensions.
 Topeka. New source of water supply.
 Whitewater. New waterworks plant.
 Winchester. New waterworks plant.

Final inspection was made of the new sewer system at Coldwater on March 31. Its acceptance was recommended.

Eugene T. Cranch, city sanitary engineer of Port Arthur, Tex., reported for duty as assistant engineer on March 22, 1920. Mr. Cranch graduated in sanitary engineering at the University of Michigan in 1917, and served as second lieutenant, sanitary corps, during the war.

A great deal of municipal work is under way in Kansas at the present time, notwithstanding the high costs of labor and material. The following is a partial list of cities actually constructing new sewer systems:

New Sewer Systems.—Ashland, Baxter Springs, Belle Plaine, Chapman, Cheney, Colby, Coldwater, Cottonwood Falls, Enterprise, Florence, Glasco, Hanover, Madison, Potwin, Scott City, Sedgwick and Smith Center.

In addition to these many other cities are planning on constructing systems this season.

Many new waterworks plants are also under construction or will be built this season. The following is a partial list of those actually under construction:

New Waterworks Plants.—Burns, Canton, Cheney, Courtland, Elk City, Hope, Munden, Potwin, Solomon and Valley Center.

II.

Record of analyses made in water and sewage laboratory at Lawrence during February and March:

<i>Source of sample.</i>	<i>Bact.</i>	<i>Chemical.</i>	<i>Miscel.</i>
City supply	671	41	..
Bottled water	6	6	..
Private supplies	18	1	..
Railroad	10	..	..
Ice .....	...	..	51
Sand .....	...	..	11
Chlorides .....	...	..	12
Boiler water .....	...	..	1
Chemical .....	...	..	26
Bacteriological .....	...	..	3
Totals	705	48	104

Total number of analyses, 857.

III.

LICENSES ISSUED.

Place, Date, Person or Firm, and Purpose.

Anthony. 2-17-20. Anthony Salt Co. Manufactured ice.
 Arkansas City. 3-8-20. Henneberry & Co. Manufactured ice.
 Buhler. 3-18-20. Farmers Ice & Produce Co. Manufactured ice.
 Cherryvale. 2-17-20. Cherryvale Ice & Cold Storage Co. Manufactured ice.

Concordia. 2-17-20. Concordia Ice & Cold Storage Co. Manufactured ice.
 Cottonwood Falls. 2-17-20. Home Light & Power Co. Manufactured ice.
 Dodge City. 3-18-20. Midland Light & Ice Co. Manufactured ice.
 Emporia. 3-29-20. Emporia Ice & Cold Storage Co. Manufactured ice.
 Fredonia. 3-8-20. Fredonia Ice & Light Co. Manufactured ice.
 Hays. 3-18-20. Golden Belt Creamery Co. Manufactured ice.
 Junction City. 2-17-20. Union Light & Power Co. Manufactured ice.
 Kansas City. 2-17-20. Armour & Company. Manufactured ice.
 Lawrence. 3-29-20. Griffin Ice Co. Manufactured ice.
 Norton. 3-8-20. Norton Ice Co. Manufactured ice.
 Oskaloosa. 3-18-20. Jefferson County Light, Power & Ice Co. Manufactured ice.
 Peabody. 2-17-20. Peabody Light, Power & Ice Co. Manufactured ice.
 Topeka. 2-17-20. Charles Wolff Packing Co. Manufactured ice.
 Wichita. 3-29-20. Wichita Ice & Cold Storage Co. Manufactured ice.
 Beloit. 3-8-20. Geo. W. Duley & Son. Natural ice.
 Ellis. 3-18-20. C. M. Raynesford. Natural ice.
 Fostoria. 3-29-20. George McCargar. Natural ice.
 Gaylord. 3-18-20. Hays & Hagadorn. Natural ice.
 Glen Elder. 3-18-20. Perkins & Company. Natural ice.
 Gypsum. 3-18-20. T. P. Wheatley. Natural ice.
 Kirwin. 3-29-20. Clarence Mason. Natural ice.
 Longford. 3-29-20. Farmers Mercantile Coöperative Association. Natural ice.
 Long Island. 3-29-20. Al Skelton. Natural ice.
 Lucas. 3-29-20. Wm. Craycraft. Natural ice.
 Melvern. 3-29-20. Melvern Ice Co. Natural ice.
 Morganville. 3-18-20. King's Meat Market. Natural ice.
 Osage. 3-18-20. E. L. Lloyd. Natural ice.
 Ransom. 3-29-20. C. J. DeWitt. Natural ice.
 Robinson. 3-8-20. F. A. Bombeck. Natural ice.
 Simpson. 3-29-20. R. F. Wanzer. Natural ice.
 Troy. 2-17-20. Hayton & VanBebber. Natural ice.
 Williamsburg. 3-8-20. D. Fogle Mercantile Co. Natural ice.

RAILROAD WATER SUPPLIES.

Arkansas City. 3-12-20. Kansas Southwestern.
 Arkansas City. 3-12-20. Missouri Pacific.
 Arkansas City. 3-12-20. Santa Fe.
 Burlington. 3-12-20. Missouri, Kansas & Texas.
 Burlington. 3-12-20. Santa Fe.
 Greenleaf. 3-12-20. Missouri Pacific.
 Newton. 3-12-20. Santa Fe.
 Newton. 3-12-20. Arkansas Valley Interurban.
 Salina. 3-12-20. Missouri Pacific.
 Salina. 3-12-20. Santa Fe.
 Salina. 3-12-20. Union Pacific.

Food Laboratory Report, March, 1920.

K. S. A. C., MANHATTAN, KAN.

Insp. No.	Substance	Retailer or Producer	Town	Butter fat	Solids not fat	Remarks
81235.	Milk.	C. S. Wilson, Parsons, Kan.		4.2.	9.83.	Passed.
81236.	Milk.	C. S. Wilson, Parsons, Kan.		4.0.	9.57.	Passed.
81237.	Milk.	C. S. Wilson, Parsons, Kan.		3.8.	10.	Passed.
81238.	Milk.	C. S. Wilson, Parsons, Kan.		2.6.	10.17.	Illegal.
81239.	Milk.	C. S. Wilson, Parsons, Kan.		3.6.	10.07.	Passed.
81240.	Milk.	C. S. Wilson, Parsons, Kan.		3.5.	10.	Passed.
81241.	Milk.	C. S. Wilson, Parsons, Kan.		2.9.	10.49.	Illegal.
81242.	Milk.	W. S. Campbell, Parsons, Kan.		4.5.	10.52.	Passed.
81243.	Milk.	W. S. Campbell, Parsons, Kan.		4.8.	10.53.	Passed.

81244.	Milk.	R. F. Wilson, Parsons, Kan.	3.	9.78.	Illegal.
81245.	Milk.	R. F. Wilson, Parsons, Kan.	4.2.	10.85.	Passed.
81246.	Milk.	R. F. Wilson, Parsons, Kan.	Sample too small.		
81247.	Milk.	R. F. Wilson, Parsons, Kan.	3.	9.65.	Illegal.
81248.	Milk.	R. F. Wilson, Parsons, Kan.	3.2.	11.38.	
81249.	Milk.	R. F. Wilson, Parsons, Kan.	3.9.	10.10.	Passed.
81250.	Milk.	J. H. Holt, Parsons, Kan.	4.2.	6.78.	Illegal.
81251.	Milk.	J. H. Holt, Parsons, Kan.	4.2.	9.54.	Passed.
81252.	Milk.	F. Cochoran, Parsons, Kan.	3.	9.94.	Illegal.
81253.	Milk.	F. Cochoran, Parsons, Kan.	3.4.	10.20.	Passed.
81254.	Cream.	O. E. Evans, Parsons, Kan.	24.2.		Passed.
81255.	Cream.	W. C. Moore, Parsons, Kan.	26.2.		
81256.	Milk.	M. Coffey, Parsons, Kan.	3.	6.95.	Illegal.
81257.	Milk.	M. Coffey, Parsons, Kan.	3.5.	10.58.	Passed.
81258.	Milk.	M. Coffey, Parsons, Kan.	4.1.	10.17.	Passed.
81259.	Milk.	J. E. Dickerson, Parsons, Kan.	2.7.	8.88.	Illegal.
81260.	Milk.	J. E. Dickerson, Parsons, Kan.	3.3.	8.46.	
81261.	Milk.	H. G. Kamitz, Parsons, Kan.	4.1.	10.49.	Passed.
81262.	Milk.	H. G. Kamitz, Parsons, Kan.	4.2.	10.19.	Passed.
81263.	Milk.	C. E. Kimball, Parsons, Kan.	3.1.	8.57.	
81264.	Milk.	C. E. Kimball, Parsons, Kan.	3.4.	8.89.	
81265.	Milk.	J. W. Dugger, Parsons, Kan.	3.5.	10.04.	Passed.
81266.	Milk.	J. W. Dugger, Parsons, Kan.	3.5.	9.75.	Passed.
81267.	Milk.	C. S. Wilson, Parsons, Kan.	3.2.	9.59.	
81268.	Milk.	C. S. Wilson, Parsons, Kan.	3.7.	9.28.	Passed.
81269.	Milk.	C. S. Wilson, Parsons, Kan.	2.5.	8.68.	Illegal.
81270.	Milk.	C. S. Wilson, Parsons, Kan.	3.4.	8.32.	
81271.	Milk.	Frank Peoples, Parsons, Kan.	3.8.	10.70.	Passed.
81272.	Milk.	Frank Peoples, Parsons, Kan.	4.6.	9.18.	Passed.
81273.	Milk.	E. A. Williams, Parsons, Kan.	3.1.	7.98.	Illegal.
81274.	Milk.	G. F. Cunningham, Parsons, Kan.	3.7.	9.50.	Passed.
81275.	Milk.	Parson's Confectionery, Parsons, Kan.	3.2.	10.26.	
93854.	Milk.	W. E. Campbell, Parsons, Kan.	3.9.	9.57.	Passed.
93855.	Milk.	W. E. Campbell, Parsons, Kan.	3.9.	9.88.	Passed.
93856.	Milk.	J. H. Holt, Parsons, Kan.	3.5.	6.62.	Illegal.
93857.	Milk.	J. H. Holt, Parsons, Kan.	3.4.	8.28.	Illegal.
93858.	Milk.	E. L. Cockrell, Parsons, Kan.	3.1.	7.07.	Illegal.
93859.	Milk.	E. L. Cockrell, Parsons, Kan.	3.	9.40.	Illegal.
93860.	Milk.	Geo. Van Hoorbeke, Parsons, Kan.	2.9.	8.92.	Illegal.
93861.	Milk.	Geo. Van Hoorbeke, Parsons, Kan.	2.6.	9.33.	Illegal.
93862.	Milk.	C. W. Myers, Parsons, Kan.	3.1.	9.40.	
93863.	Milk.	C. W. Myers, Parsons, Kan.	3.6.	9.52.	Passed.
93864.	Milk.	Geo. Van Hoorbeke, Parsons, Kan.	3.6.	8.62.	Passed.
93865.	Milk.	Geo. Van Hoorbeke, Parsons, Kan.	3.8.	8.77.	Passed.
93852.	Cream.	E. G. Ferguson & Co., Independence, Kan.	21.		Passed.
93853.	Cream.	W. C. Gooddell, Independence, Kan.	24.6.		Passed.

Termination of Cases Prosecuted for Violation of Food and Drugs Law and Regulations.

(July 1, 1919, to October 1, 1919.)

<i>Defendant, Town, Violation, Date of termination, Inspector's No., Amount fined, Costs.</i>
Wood, Thomas & Crane. Coffeyville. Manufacturing adulterated ice cream. July 9, 1919. 81197-8. \$25 and \$6.
J. A. Warren, Coffeyville. Manufacturing substandard ice cream. July 9, 1919. 81199-81200. \$50 and \$6.
H. Cohoone Grocery. Cottonwood Falls. Keeping and offering for sale eggs unfit for food. July 18, 1919. \$10 and \$1.75.
J. R. Wills, Bronson. Keeping and offering for sale eggs unfit for food. July 16, 1919. \$10 and costs.
Caleb Brown, Bronson. Keeping and offering for sale eggs unfit for food. July 16, 1919. \$10 and costs.
J. T. Ralston, Elsmore. Keeping and offering for sale eggs unfit for food. July 16, 1919. \$10 and costs.
W. A. Stroud, Uniontown. Keeping and offering for sale eggs unfit for food. July 18, 1919. \$10 and costs.
Fred Humen, Holton. Keeping and offering for sale eggs unfit for food. July 18, 1919. \$10 and \$2.50.
Chas. Bagler, Mgr., Kimball. Keeping and offering for sale eggs unfit for food. July 19, 1919. \$10 and costs.
W. C. Powell, Thayer. Keeping and offering for sale eggs unfit for food. July 21, 1919. \$10 and costs.
Harry E. Gregg, Girard. Keeping and offering for sale eggs unfit for food. July 25, 1919. \$10 and costs.
P. F. Thompson, Bern. Keeping and offering for sale eggs unfit for food. July 23, 1919. \$10 and \$3.75.

- R. G. Davis, Wakefield. Keeping and offering for sale eggs unfit for food. July 30, 1919. \$10 and costs.
- R. A. Wylie, Monmouth. Keeping and offering for sale eggs unfit for food. July 31, 1919. \$10 and costs.
- Wm. C. Slane, Straus. Keeping and offering for sale eggs unfit for food. July 31, 1919. \$10 and costs.
- W. I. Jones, Straus. Keeping and offering for sale eggs unfit for food. July 31, 1919. \$10 and costs.
- Geo. W. Carey, Tyro. Keeping and offering for sale eggs unfit for food. Aug. 6, 1919. \$10 and costs.
- L. P. Hanson, Chanute. Keeping and offering for sale eggs unfit for food. Aug. 7, 1919. \$25 and costs.
- J. W. Goodwin, Woodston. Keeping and offering for sale eggs unfit for food. Aug. 8, 1919. \$10 and \$3.50.
- J. W. Armentrout, Winfield. Keeping and offering for sale eggs unfit for food. Aug. 9, 1919. \$5 and costs.
- John Horner, Independence. Keeping and offering for sale eggs unfit for food. Aug. 11, 1919. \$20 and \$7.
- Peister Bros., Peru. Keeping and offering for sale eggs unfit for food. Aug. 12, 1919. \$10 and costs.
- Elmer Hines, Hunnewell. Keeping and offering for sale eggs unfit for food. Aug. 23, 1919. \$1 and \$8.05.
- Jos. Flemming, Cedar Vale. Keeping and offering for sale eggs unfit for food. Aug. 6, 1919. \$10 and costs.
- Miss Fanny Lee, Dexter. Keeping and offering for sale eggs unfit for food. Aug. 13, 1919. \$10 and costs.
- H. Buvinger, Bartlett. Keeping and offering for sale eggs unfit for food. Aug. 14, 1919. \$10 and costs.
- W. H. Hammond, Mgr., Great Bend. Manufacturing adulterated ice cream. Aug. 15, 1919. \$100 and \$6.50.
- Grovier Produce Co., Geo. L. Seely, Mgr., Great Bend. Manufacturing adulterated ice cream. Aug. 15, 1919. \$25 and \$6.50.
- Chas. N. Clark, Edna. Keeping and offering for sale eggs unfit for food. Aug. 15, 1919.
- Allderdice Supply Store, Coldwater. Keeping and offering for sale eggs unfit for food. Aug. 18, 1919. \$10 and costs.
- Cook & Baker, Coldwater. Keeping and offering for sale eggs unfit for food. Aug. 18, 1919. \$10 and costs.
- Pete Ratzloff, Ratzloff Bros., Murdock. Keeping and offering for sale eggs unfit for food. Aug. 18, 1919. \$85 and \$9.25.
- A. E. Bates, Mgr., Farmers Union, Allen. Keeping and offering for sale eggs unfit for food. Aug. 19, 1919. \$5 and \$12.55.
- Davis Bros., Bushong. Keeping and offering for sale eggs unfit for food. Aug. 20, 1919. \$1 and costs.
- H. W. Schroeder, Chase. Keeping and offering for sale eggs unfit for food. Aug. 20, 1919. \$10 and \$7.05.
- Dora Hobble, Mitchell. Keeping and offering for sale eggs unfit for food. Aug. 20, 1919. \$10 and \$6.05.
- Aug. Hoopes, Silica. Keeping and offering for sale eggs unfit for food. Aug. 20, 1919. \$10 and costs.
- Farmers Union, Wayne. Keeping and offering for sale eggs unfit for food. Aug. 22, 1919. \$10 and \$5.50.
- A. N. Matson, Bridgeport. Keeping and offering for sale eggs unfit for food. Aug. 27, 1919. \$5 and \$9.95.
- G. O. Gard, Lincoln. Keeping and offering for sale eggs unfit for food. Aug. 25, 1919. \$25 and \$9.
- J. W. Bivens, Oberlin. Not candling eggs. Aug. 26, 1919. \$5 and \$4.50.
- W. G. Colbert, Oberlin. Not candling eggs. Aug. 26, 1919. \$5 and \$4.50.
- W. B. Wernette, Dresden. Keeping and offering for sale eggs unfit for food. Aug. 26, 1919. \$5 and \$4.50.
- T. Powers, Steepleville. Not candling eggs. Aug. 30, 1919. \$10 and \$5.50.
- Geo. Crawford, Topeka. Selling portion of animal unfit for food. Aug. 30, 1919. \$10 and costs.
- E. C. Rankin, Delia. Keeping and offering for sale eggs unfit for food. Sept. 11, 1919. \$10 and \$1.50.
- E. I. Zirkle, Delia. Keeping and offering for sale eggs unfit for food. Sept. 11, 1919. \$10 and \$1.50.
- C. W. Leamer, Leamer Mercantile Co., Onaga. Keeping and offering for sale eggs unfit for food. Sept. 11, 1919. \$10 and 50 cents.
- Ross Melton, Hoyt. Keeping and offering for sale eggs unfit for food. Sept. 15, 1919. \$10 and 50 cents.
- Sumner County Farmers Union, Corbin. Keeping and offering for sale eggs unfit for food. Sept. 13, 1919. \$1 and \$9.25.
- E. Berges, Duluth Mercantile Co., Duluth. Keeping and offering for sale eggs unfit for food. Sept. 15, 1919. \$10 and \$3.70.
- V. E. Hanson, Pres., Farmers Union, Olsburg. Keeping and offering for sale eggs unfit for food. Sept. 16, 1919. \$10 (no costs).
- J. A. Green, Westmoreland. Keeping and offering for sale eggs unfit for food. Sept. 16, 1919. \$10 and \$2.
- S. W. Ellis, Havensville. Keeping and offering for sale eggs unfit for food. Sept. 17, 1919. \$10 and \$1.25.
- T. S. Roots, Pres., Farmers Union, Kelly. Keeping and offering for sale eggs unfit for food. Sept. 18, 1919. \$10 and \$3.

BULLETIN

OF THE

Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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MAY, 1920.

VOL. XVI.

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The typhoid fly is always on the job!

Health habits make for healthy living.

Only the unvaccinated have typhoid fever.

The 135 deaths from typhoid fever in Kansas in 1919 were unnecessary.

Again we remark, "There is no substitute for milk in the diet of the child."

Living is, first of all, a spiritual experience; it is less a matter of brawn than of will.

Teachers: You cannot successfully teach sanitation in school and tolerate insanitary conditions at school.

Communicable diseases of the respiratory system can be controlled only by correct health habits of the people.

Why patronize the stuffy, poorly ventilated moving-picture theater any more than you would the dirty, dangerous food dealer? Both are a menace to public health.

MORBIDITY REPORT FOR APRIL, 1920.

				Scarlet Fever ...	Measles (morbilli) ...	German Measles (rubella) ...	Whooping Cough...			Measles (epidemic) ...	Polio myelitis (epidemic) ...	Other Diseases (see Addenda)...
				298	1084	8	254	2		1	351	
1918												
Anderson	0	2	0	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	0	1	0	0	0	0	0	0	0
Atchison city	0	0	0	0	0	0	0	0	0	0	0	0
Barber	0	1	0	0	0	0	0	0	0	0	0	0
Barton, except	1	0	0	0	0	0	0	0	0	0	0	0
Great Bend	0	0	0	0	2	0	0	0	0	0	0	0
Bourbon, except	0	3	1	0	1	1	0	0	0	0	0	0
Fort Scott	0	16	1	0	8	18	0	0	0	0	0	0
Brown	0	2	0	1	7	12	0	1	2	1	0	0
Butler, except	0	14	4	0	4	20	0	1	1	0	0	0
Augusta	1	1	0	0	7	0	0	0	0	0	0	0
El Dorado	2	37	1	0	1	44	0	7	8	0	0	0
Chase	0	6	0	0	4	40	0	23	0	6	0	0
Chautauqua	0	5	0	0	4	4	1	0	0	0	2	0
Cherokee, except	0	1	2	6	6	9	0	0	0	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	2	0	1	0	1	0	2	0	0	0	0
Clark*	0	0	0	1	4	0	0	0	1	0	0	0
Clay	0	0	0	10	1	0	0	0	0	0	0	0
Cloud, except	0	0	0	0	0	0	0	0	0	0	0	0
Concordia	0	0	0	0	6	8	0	0	0	0	0	0
Coffey	0	0	0	0	0	0	0	0	0	4	2	0
Comanche	0	0	0	0	0	0	0	0	0	0	1	0
Cowley, except	0	2	0	6	0	7	0	0	1	3	0	0
Arkansas City	0	0	0	0	1	1	0	0	5	3	1	0
Winfield	1	0	0	0	1	3	0	18	1	2	0	0
Crawford, except	0	5	0	10	0	16	0	4	1	0	0	0
Pittsburg	0	48	14	1	1	0	0	0	0	0	0	0
Decatur	0	0	0	0	0	4	0	0	0	0	8	0
Dickinson	0	81	1	1	8	6	0	11	0	0	0	0
Doniphan	0	4	0	0	6	5	0	0	0	0	0	0
Douglas, except	0	1	0	1	0	4	0	0	8	18	0	0
Lawrence	0	1	1	0	1	33	0	0	4	18	0	0
Edwards	0	0	1	0	0	3	0	0	0	0	0	0
Elk*	0	0	0	0	1	2	0	0	1	0	0	0
Ellis	0	6	1	13	1	0	0	0	1	3	0	0
Ellsworth	0	0	0	0	3	0	0	1	5	8	0	0
Finney	0	88	0	0	0	0	0	1	1	4	0	0
Ford, except	0	0	1	0	7	48	0	0	0	0	0	0
Dodge City	0	0	0	0	0	9	0	0	1	0	0	0
Franklin, except	0	2	0	0	1	16	0	0	0	0	0	0
Ottawa	0	1	0	0	0	0	0	0	0	0	0	0
Geary, except	0	0	0	0	0	0	0	3	0	0	0	0
Junction City	0	0	0	0	2	0	1	0	8	1	0	0
Gove*	0	2	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	0	0	0	0	0
Grant*	0	2	0	0	3	0	0	0	2	1	0	0
Gray	0	0	0	0	0	0	0	0	0	0	0	0
Greeley*	0	17	0	3	1	0	0	0	1	1	1	0
Greenwood	0	0	0	1	0	0	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0
Harper	2	6	0	0	1	0	0	8	0	0	0	0
Harvey, except*	0	0	0	0	0	0	0	0	0	0	0	0
Newton	0	0	0	0	0	1	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	4	0	0
Hodgeman	0	7	0	0	1	1	0	0	0	0	0	0
Jackson	0	3	0	0	1	4	0	0	4	0	0	0
Jefferson	0	5	6	1	1	4	0	0	0	0	2	0
Jewell	0	15	0	0	0	8	0	1	0	1	0	0
Johnson	0	8	0	1	5	21	0	0	0	0	2	0
Kearny	0	2	0	0	0	0	0	0	0	0	0	0
Kingman	0	9	1	0	1	0	0	0	0	0	0	1
Kiowa	0	0	0	0	3	0	0	6	0	0	1	0
Labette, except	0	0	1	0	6	0	0	0	0	0	0	8
Parsons	0	11	2	0	2	2	0	0	2	0	1	6
Lane*	0	0	0	0	2	1	0	1	0	1	0	1
Leavenworth, except	0	0	0	0	1	0	0	3	1	0	0	0
Leavenworth city	0	0	1	0	1	0	0	0	0	0	0	0

MORBIDITY REPORT FOR APRIL, 1920—Concluded.

COUNTIES AND CITIES.	Other Diseases (see Addenda).	Poliomyelitis (epidemic).	Meningitis.	Smallpox.	Diphtheria.	Influenza.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Paratyphoid.	Typhoid and Paratyphoid.
Lincoln.....	0	0	0	0	0	0	0	0	0	2	0	2	0	0
Linn.....	0	0	0	2	0	0	0	11	0	0	0	0	0	0
Logan.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia.....	0	0	0	4	1	0	0	0	0	0	0	0	0	0
Marion.....	0	0	0	0	0	0	0	11	0	0	0	0	0	0
Marshall.....	0	0	0	2	0	1	0	10	0	0	0	0	0	0
McPherson.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meade.....	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Miami.....	0	0	0	0	0	1	0	25	0	0	0	0	0	0
Mitchell.....	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville.....	0	0	0	7	0	1	1	79	0	3	2	0	0	0
Independence.....	0	0	0	4	0	0	0	18	0	1	2	0	0	0
Morris.....	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Morton.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Nemaha.....	0	0	0	0	1	0	0	8	0	0	0	0	0	0
Neosho, except Chanute.....	0	0	0	2	0	0	0	2	1	4	0	0	0	0
Ness*.....	0	0	0	0	1	0	0	2	0	0	0	0	0	0
Norton.....	0	0	0	2	0	0	1	20	0	0	0	0	0	0
Osage.....	0	0	0	5	2	1	0	16	0	0	1	0	0	0
Osborne.....	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ottawa.....	0	0	0	0	0	58	0	0	0	5	2	0	0	0
Pawnee.....	0	0	0	1	0	0	11	0	0	2	4	0	0	0
Phillips.....	0	0	0	4	2	6	0	0	0	0	0	0	0	0
Pottawatomie.....	0	0	0	8	0	1	0	0	0	0	0	0	0	0
Pratt.....	0	0	0	7	0	0	2	1	0	1	8	0	0	0
Rawlins.....	0	0	0	6	7	0	1	8	0	0	0	0	0	0
Reno, except Hutchinson.....	0	0	0	0	1	0	1	1	0	0	0	0	0	0
Republic.....	0	0	0	8	0	0	1	48	0	4	9	2	0	0
Rice.....	0	0	0	4	0	0	6	10	0	1	6	9	2	0
Riley, except Manhattan.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks.....	0	0	0	1	0	0	4	40	0	4	9	1	0	0
Rush.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell.....	0	0	0	0	0	4	0	0	0	0	0	1	0	0
Saline, except Salina.....	0	0	0	6	0	0	0	0	0	0	1	0	0	0
Salina.....	0	0	0	7	2	0	4	9	0	0	2	0	0	0
Scott.....	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita.....	0	0	0	10	0	0	8	11	0	0	8	0	1	0
Seward.....	1	78	2	0	0	8	6	52	0	18	29	19	4	0
Shawnee, except Topeka.....	0	0	0	0	1	4	0	2	0	1	0	0	0	0
Sheridan.....	2	20	1	0	0	7	6	123	0	72	84	1	2	0
Sherman.....	0	0	0	0	0	0	8	1	0	0	8	1	0	0
Smith.....	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Stafford.....	0	19	0	0	0	6	0	11	0	0	0	1	0	0
Stanton.....	0	0	1	0	0	0	8	2	0	0	0	0	0	0
Stevens*.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington.....	1	3	3	0	0	10	1	1	0	1	0	2	2	0
Thomas*.....	0	3	1	0	0	2	1	0	0	3	3	1	0	0
Trego.....	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee.....	0	1	1	0	0	0	1	13	0	0	0	0	0	0
Wallace*.....	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Washington.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita.....	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Wilson.....	0	5	4	1	1	1	1	1	0	0	1	14	0	0
Woodson.....	0	4	0	1	5	1	5	1	0	0	2	4	0	0
Wyandotte, except Kansas City.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale.....	1	14	16	4	6	135	0	18	7	10	14	0	0	60
.....	0	0	0	0	0	0	0	1	0	0	0	0	0	37

* No report.

Other communicable diseases: Actinomycosis, 1; cancer, 17; chancreoid, 6; erysipelas, 16; gonorrhea, 162; lethargic encephalitis, 1; ophthalmia neonatorum, 1; syphilis, 121; trachoma, 25.

A Reliable Disinfectant Bath for Soda-water Glasses and Other Drinking and Eating Utensils.

Upon request of the State Board of Health the drug laboratory undertook to determine if sodium hypochlorite solution would serve as an efficient disinfectant for washed soda-water glasses and other drinking and eating utensils.

Laboratory experiments to cover the situation were accordingly designed and carried out. This was accomplished by first procuring cultures of three organisms, one a culture of *micrococcus aureus*, an organism which produces boils and abscesses and is found abundantly in the mouth and throat. It is relatively easy to kill. Another, a culture of *typhoid bacillus*, the bacteria causing typhoid fever; and last, a culture of *streptococcus pyogenes*, which causes sore throat and various skin eruptions. This organism is very resistant and difficult to kill with ordinary disinfectants.

Broth cultures of these organisms were prepared and incubated twenty-four hours at body heat to obtain a luxuriant growth, then poured into glasses, previously sterilized in an autoclave. The glasses were drained, one at a time, dipped into a disinfectant bath and removed immediately. Each glass was next rinsed with sterile broth and a portion of the broth streaked on agar and incubated at body temperature to ascertain whether or not the organisms had been killed by the disinfectant bath.

The time element in this way is reduced to a minimum, but so would it be in actual practice. Many solutions can be prepared, which will be good disinfectants if allowed to remain in contact for some time and at a temperature somewhat above room temperature (72° F.).

Tabulation of experiments with various solutions, together with results obtained, are herewith subjoined. It may be of interest to note here that results obtained from some solutions were somewhat surprising, as will be indicated.

The calcium hypochlorite solution employed was made by triturating bleaching powder with water and straining the mixture. The sodium hypochlorite solution used is best made as directed in making solution No. 1.

The formula for the disinfecting bath is given below, for convenience, in both the apothecaries and metric systems.

FORMULA IN APOTHECARIES SYSTEM.

Solution No. 1.—Triturate 12 ounces (one can) bleaching powder to a smooth paste in 20 fluid ounces of water and wash the mixture into a large flask or bottle (about one gallon) with 14 fluid ounces of water. Add 8.4 ounces pure sodium carbonate dissolved in 17 fluid ounces of hot water. Shake the contents thoroughly; if it becomes gelatinous, warm gently. Transfer the whole to a wet muslin strainer in a large funnel and return the first portion which comes through until the liquid is clear. Drain and wash with small successive portions of water sufficient amount to make 50 fluid ounces.

Use four fluid ounces to each three gallons (1.3 fluid ounces to gallon) of the disinfectant bath.

Solution No. 2.—Measure exactly 3 fluid ounces C. P. hydrochloric acid (sp. gv., 1.17) into a container graduated for 32 fluid ounces, and add enough water to make 32 fluid ounces.

Use 1 fluid ounce solution No. 2 to each gallon of the disinfectant bath in its final preparation for use.

FORMULA IN METRIC SYSTEM.

Solution No. 1.—Triturate 200 grams bleaching powder to a smooth paste, using 400 cc. water, and wash into 2-liter flask with 200 cc. water. Add 140 grams pure sodium carbonate dissolved in 250 cc. hot water. Shake thoroughly; if contents become gelatinous, warm. Transfer to a wetted muslin strainer in a funnel and return first portion of filtrate until it comes through clear. Drain and wash with small successive portions of water to make 1,000 grams of the solution.

Use 10 cc. of solution No. 1 to make 1 liter disinfectant bath.

Solution No. 2.—Measure exactly 69 cc. C. P. hydrochloric acid (sp. gv., 1.17) into a liter flask and make up to a liter with distilled water.

Use 10 cc. to each liter disinfectant bath in final preparation for use.

Precautions.—All weights and measurements must be made *exact* for maximum results. Distilled water must be used in making solutions 1 and 2, and preferably, but not necessarily, in making the final bath. The bleaching powder must have at least 30 per cent available chlorine present. The most favorable temperature for the bath is between 80° and 95°F. (27°-35°C.).

The method of application is simply to dip the previously washed glass into the bath, allowing all parts to come in contact with the liquid, and sterilization is complete. The bath is harmless to the hands.

It must be generally understood that no disinfectant, no matter how efficient, can so readily disinfect a dry or dirty glass. The particles of dirt (organic matter) envelop the organisms and form a protective coating. To illustrate the truth of this statement, glasses infected by a broth culture of *streptococcus pyogenes*, were allowed to dry spontaneously, then dipped twice in quick succession into bath 18, and when streaked on agar, the organisms were found to be alive. Therefore, after use at fountain, glasses must not be permitted to become dry but should be, preferably, rinsed in tap water before going into the bath. This precaution would also help to maintain the efficiency for a longer period than otherwise would be possible. Care must be taken not to increase alkalinity by careless addition of wash water. Glasses are to be rinsed with clean water after the disinfecting bath.

Solution number 1 was made up by four different formulas, using less sodium carbonate, and neutral baths of 0.05 per cent available chlorine made from them, but all proved unsatisfactory.

Bath number 18 was tried again with the same good results, and was found to be germicidal to *micrococcus aureus* and typhoid bacillus even after standing seven days. A liter was then tried on 150 glasses in a series and found to be efficient for that number. Although this bath under good conditions is germicidal more than twenty-four hours, it is strongly recommended that it be prepared fresh each day.

It may be noted in the experimental data that the hot water is not at all efficient in the time allowed. By comparing the results, it can be seen that a 0.06 per cent available chlorine solution is of little more value

TABULATION.

Disinfectant bath.	Organism.	Killed.		Growth inhibited.
		Fresh bath.	Bath 24 hrs. old.	
Exp. 1.—Boiling water.....	Micrococcus aureus.....	—	.....	—
	Typhoid bacillus.....	—	.....	+
	Streptococcus pyogenes...	+	.....	+
Exp. 2.—Calcium hypochlorite solution..... 0.04 % available chlorine made alkaline with sodium carbonate.	Micrococcus aureus.....	+	—	+
	Typhoid bacillus.....	—	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 3.—Calcium hypochlorite solution..... 0.04 % available chlorine made acid with salicylic.	Micrococcus aureus.....	—	—	—
	Typhoid bacillus.....	—	—	—
	Streptococcus pyogenes...	—	—	—
Exp. 4.—Calcium hypochlorite solution..... 0.04 % available chlorine.	Micrococcus aureus.....	+	+	+
	Bacillus typhosus.....	—	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 5.—Calcium hypochlorite solution..... with 5 gm. sodium carbonate per liter. 0.04 % available chlorine.	Micrococcus aureus.....	+	+	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	—	—	—
Exp. 6.—Calcium hypochlorite solution..... 0.06 % available chlorine.	Micrococcus aureus.....	+	—	+
	Typhoid bacillus.....	+	—	+
	Streptococcus pyogenes...	+	—	+
Exp. 7.—Calcium hypochlorite solution..... 0.06 % available chlorine with 5 gm. sodium carbonate per liter.	Micrococcus aureus.....	+	+	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	—	—	+
Exp. 8.—Experiment 7 repeated with same results.				
Exp. 9.—Calcium hypochlorite solution..... 0.06 % available chlorine made acid with hydrochloric acid.	Micrococcus aureus.....	+	—	+
	Typhoid bacillus.....	+	—	+
	Streptococcus pyogenes...	+	—	+
Exp. 10.—Calcium hypochlorite solution..... 0.06 % available chlorine with 2 gm. sodium salicylate per liter.	Micrococcus aureus.....	—	—	+
	Typhoid bacillus.....	+	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 11.—Calcium hypochlorite solution..... 0.06 % available chlorine with 10 gm. sodium carbonate and 2 gm. sod. salicylate per liter.	Micrococcus aureus.....	—	—	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	—	—	—
Exp. 12.—Calcium hypochlorite solution..... 0.06 % available chlorine with 1 gm. mercuric chloride per liter.	Micrococcus aureus.....	+	+	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	+	+	+
Exp. 13.—Sodium hypochlorite solution..... 0.04 % available chlorine.	Micrococcus aureus.....	—	—	+
	Typhoid bacillus.....	—	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 14.—Sodium hypochlorite solution..... 0.04 % available chlorine nearly neutralized with hydrochloric acid.	Micrococcus aureus.....	—	—	+
	Typhoid bacillus.....	+	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 15.—Sodium hypochlorite solution..... 0.05 % available chlorine.	Micrococcus aureus.....	—	—	—
	Typhoid bacillus.....	—	—	+
	Streptococcus pyogenes...	—	—	—
Exp. 16.—Sodium hypochlorite solution..... 0.1 % available chlorine.	Results same as for Experiment 15.			
Exp. 17.—Sodium hypochlorite solution..... 0.05 % available chlorine + 50 cc. N/10 HCl per liter.	Micrococcus aureus.....	+	+	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	—	—	+
Exp. 18.—Sodium hypochlorite solution..... 0.05 % available chlorine + 80 cc. N/10 HCl per liter.	Micrococcus aureus.....	+	+	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	+	+	+
Exp. 19.—Sodium hypochlorite solution..... 0.05 % available chlorine + 120 cc. N/10 HCl per liter.	Micrococcus aureus.....	+	—	+
	Typhoid bacillus.....	+	+	+
	Streptococcus pyogenes...	+	—	+

than a 0.04 per cent solution. A strong alkaline solution appears to be as good the second day as the first and to be as powerful as a neutral solution. The sodium carbonate tends to hold the chlorine in solution. A solution made acid with hydrochloric acid is strongly germicidal when freshly prepared, but of no value after standing twenty-four hours, because the chlorine is liberated and soon escapes from the solution. Sodium salicylate, germicidal in itself, appears to add no power to the hypochlorite solutions.

The sodium hypochlorite solution proved to be of no value even in a strong (0.1) available chlorine solution. This was a revelation very disappointing, to say the least. The idea of reducing the alkalinity suggested itself. Therefore, varying amounts of N/10 hydrochloric acid, sufficient to neutralize the solution, were added to baths 17, 18 and 19. The results were somewhat striking in that it was found that the maximum results were obtained, as will be seen, in the mean between 17 and 19, namely 18.

Baths 12 and 18 both proved highly satisfactory as far as germicidal power is concerned, but bath number 12 is undesirable and impracticable because of the highly poisonous character of mercuric chloride even in a 1:1000 solution. Bath 18, on the other hand, is ideal in that it is non-poisonous, safe to handle, easily made, and inexpensive—one can of bleaching powder and one-half pound of sodium carbonate being sufficient for about 40 gallons of bath.

CONCLUSIONS.

1. It will be seen that nineteen different solutions of various compositions were experimented with. The solutions containing available chlorine were the only ones that were available for making a disinfectant bath. Of the various sodium hypochlorite baths tested it was found that the amount of free chlorine was not the only factor that determined efficiency. For example, a bath containing 0.1 per cent of available chlorine was no more efficient than one containing 0.04 per cent or 0.05 per cent.

2. The efficiency of the hypochlorite bath seems to depend not only upon the available chlorine but also upon the degree of alkalinity of the solution. The most efficient solution seems to be that containing 0.05 per cent of available chlorine and a degree of alkalinity represented by almost the neutral point. In order to determine the exact amount of alkalinity, an aliquot portion of the solution neutralized with its equivalent of HCl (the amount designated in formula 18), was evaporated to dryness; the residue redissolved in distilled water and the resulting solution titrated. It was found that one cc. of the original solution thus prepared corresponded to 5.0 cc. of N/10 HCl. Since 10 cc. are used in a liter of bath the alkalinity of this would make a liter of the bath correspond to 50 cc. N/10 HCl.

3. This solution of the above alkalinity can be arrived at by using the proportions indicated in formula 18, using the solutions and mixing same as prescribed in said formula.

4. Since one of the microorganisms resisted the boiling water bath and only two were inhibited in growth, therefore it would seem that any

treatment with boiling water, much less warm water, would be absolutely unreliable unless care were taken that the utensils were permitted to remain in such a bath for some minutes. It is also suggested that the wiping of the cleansed tumbler with a fabric would be objectionable, for the reason that the repeated use of same would tend toward a risk of contamination.

L. E. SAYRE, *Director*.

F. A. PATTY, *Chemist*.

Report of Division of Water and Sewage.

APRIL, 1920.

CHAS. A. HASKINS, *Chief*.

I.

PERMITS ISSUED OR REFUSED FOR WATERWORKS AND SEWERAGE.

Place, Date, and Nature of Improvement.

Canton. April 30. New water supply.

Protection. April 5. Sewer system.

Scott City. April 14. Sewer system.

FINAL INSPECTION OF NEW WORK AND APPROVAL OF SAME.

Place, Date, and Nature of Improvement.

Chapman. April 15. Sanitary sewer system.

Sharon Springs. April 13. Waterworks extensions.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Abilene. Extensions to water supply.

Arcadia. New water supply.

Augusta. Extensions to water supply.

Axtell. New water supply.

Bird City. New water supply.

Douglas. Extensions to water supply.

El Dorado. Sewage disposal plant.

Emporia. Sewage disposal plant.

Erie. Extensions to water supply.

Galena. New water supply.

Goodland. Sewer system.

Greenleaf. Extensions to water supply.

Kinsley. Sewer extensions.

Haven. New water supply.

Hillsboro. New water supply.

Independence. Sewer extensions.

Madison. New sewer system.

Manhattan. Water softening plant.

Ottawa. Water purification plant.

Preston. New water supply.

Peabody. Extensions to water supply.

Rocky Ford Milling & Power Co. New water supply.

Salina. Sewer extensions.

Sedan. Water purification plant.

Topeka. Extensions to water supply.

White Water. New water supply.

II.

Record of analyses made in Water and Sewage Laboratory at Lawrence, during April, 1920:

<i>Source of Samples.</i>	<i>Bact.</i>	<i>Chem.</i>	<i>Miscel.</i>
City Supply	451	48	..
Bottled Water	2	1	..
Private Supplies	19	1	..
Railroad	9	..	..
Ice	54	..	..
Sand .....	..	..	1
Chlorides .....	..	..	2
Chemical .....	..	..	4
Bacteriological .....	..	..	3
	<hr/> 535	<hr/> 50	<hr/> 10

Total number of analyses, 595.

LICENSES ISSUED.

Place, Date, Person or Firm, and Purpose.

Blue Rapids. 4-22-20. Blue Rapids Ice & C. S. Co. Manufactured ice.
 Osage City. 4-22-20. Farmers Coöp. Crmy. Co. Manufactured ice.
 Parsons. 4-9-20. Parsons C. S. & Cry. Ice Co. Manufactured ice.
 Topeka. 4-9-20. Beatrice Creamery Co. Manufactured ice.
 Topeka. 4-9-20. Mutual Ice & C. S. Co. Manufactured ice.
 Wamego. 4-29-20. J. W. Machin. Manufactured ice.
 Wichita. 4-22-20. Jacob Dold Pack. Co. Manufactured ice.
 Cawker City. 4-22-20. C. W. Holte. Natural ice.
 Clay Center. 4-9-20. Starkweather & Wilson. Natural ice.
 Clyde. 4-22-20. J. D. & Geo. Danielson. Natural ice.
 Delphos. 4-9-20. Owen D. Gautreaux. Natural ice.
 Delphos. 4-29-20. G. D. Hockett. Natural ice.
 Emmett. 4-22-20. Frank Ditch. Natural ice.
 Everest. 4-29-20. R. H. Rosenhoover. Natural ice.
 Falun. 4-29-20. A. R. Anderson. Natural ice.
 Horton. 4-29-20. W. G. Kelley. Natural ice.
 Irving. 4-22-20. A. J. Carlson. Natural ice.
 La Cygne. 4-9-20. Cullison & Miller. Natural ice.
 Lenora. 4-22-20. Floyd Bull. Natural ice.
 Louisville. 4-22-20. H. M. Harrison. Natural ice.
 Lyndon. 4-29-20. Parry & Williams. Natural ice.
 Mound City. 4-9-20. Underhill & Co. Natural ice.
 Muscotah. 4-29-20. Charles Elson. Natural ice.
 Nortonville. 4-22-20. John A. Didde. Natural ice.
 Paxico. 4-22-20. J. E. Werner. Natural ice.
 Paxico. 4-22-20. Wilt Bros. Natural ice.
 Reading. 4-22-20. Henry E. Rains. Natural ice.
 Scandia. 4-29-20. Victor E. Anderson. Natural ice.
 Smith Center. 4-29-20. Rogers Ice Company. Natural ice.
 Strong City. 4-22-20. W. W. Harvey. Natural ice.
 Washington. 4-29-20. C. H. Philbrook. Natural ice.
 Westmoreland. 4-29-20. W. W. Plummer & Co. Natural ice.
 Westmoreland. 4-29-20. H. M. Pomeroy. Natural ice.

RAILROAD WATER SUPPLIES.

Lawrence. 4-5-20. Kansas City, Kaw Valley & Western. Railroad.
 Ellinwood. 4-5-20. Santa Fe. Railroad.
 Miltonvale. 4-24-20. Union Pacific. Railroad.
 Minneapolis. 4-24-20. Santa Fe. Railroad.
 Oakley. 4-27-20. Union Pacific. Railroad.

How Our Money is Expended and the Returns.

Not infrequently we are asked how the money appropriated to the State Board of Health is expended and what results are secured.

To give an itemized statement of the expenditures would constitute rather a large order. However, it is possible and practical to give a statement which will serve as an index of results secured. It is commonly acknowledged and with perfectly rational foundation that the prevalence of typhoid fever in a community is the index of sanitary work and the results in that community.

Using this one disease as a basis of results we reach the following conclusion.

The legislature in 1919 appropriated the sum of \$14,200 per year to the Epidemiological Division of the State Board of Health. This was expended in 1919 in efforts to improve the sanitary condition throughout the state. The results of these efforts are not attributable entirely to the work performed in 1919 but have been accumulating for the past several years. It must be continued more energetically in the future.

A study of the records shows that during the three years 1912, 1913, and 1914, there were an average of 330 deaths per year from typhoid fever in the state of Kansas. In 1919 there were 135 deaths from typhoid fever, or a saving of 195 lives. Placing the value of a life at \$5,000, this means a saving to the state of \$975,000. But this is not all. In preventing deaths from typhoid fever we must have prevented cases of typhoid fever, and assuming a 10 per cent death rate from this disease (many good authorities are now assuming a 5 per cent rate) we must have prevented 1,950 cases of typhoid fever. Every case of typhoid fever means a loss to the individual, his family or the community, of \$300; therefore, in preventing 1,950 cases of typhoid fever we must have saved, to the people of the state, \$585,000. This added to the \$975,000 represented by the saving of lives, makes a total of \$1,560,000. In other words, for an expenditure in 1919 of \$14,200 there was returned to the people of the state a net earning of \$1,545,800.

The same figures set forth in form of double entry bookkeeping show as follows:

	<i>Dr.</i>	<i>Cr.</i>
Debtor to appropriation	\$14,200.00	
Credit by 195 lives @ \$5,000		\$975,000.00
by 1950 cases prevented @ \$300....		585,000.00
	<hr/>	<hr/>
	\$14,200.00	\$1,560,000.00
		\$14,200.00
		<hr/>
Balance		\$1,545,800.00

The above figures represent the returns to the state in only one disease, but it is well known that we cannot fight any one disease without having influence on all other preventable diseases; in fact, eminent authorities have set forth the undisputed statement that for every death prevented from typhoid fever two deaths from other diseases are prevented, therefore we can justly multiply the above balance by three as indicating the returns to the state of Kansas for the expenditure of \$14,200 per year.

Damages for Sickness Caused by Flies.

The courts have passed upon the question of damages for a sufferer from typhoid who could trace his illness to flies feeding upon the filth of sewage. A few years ago a man living in Germantown, Philadelphia, recovered heavy damages from the city for his illness, which he proved was caused by a stream flowing through his yard which had been polluted by sewage from a house tenanted by a typhoid patient. The defense relied upon proof that the plaintiff had neither drunk from nor bathed in the stream, but an entomologist convinced the jury that he had contracted the disease through the medium of flies which had carried the infection from the stream to the food exposed to their visits in his house.—*Iowa Bulletin*.

Sam Jordan's Respects to the House Fly.

Lo! the nasty house fly! He is of many days and full of filth. He goeth forth at sunrise and layeth his eggs in fresh horse manure, which is even his greatest delight, to the number of an hundred and twenty. Then straightway he cometh to visit the cook, and proceedeth to take his morning meal, and perchance he falleth into the cream, or into the hot fat, and forthwith he perisheth, or he may enter into the dining place and he wipeth his feet on thy porterhouse, or leaveth his change on thy toast, or straightway he tumbleth into thy butter and becometh much balled up:

About the ninth hour he hiketh for the street, and behold a man passeth who is sore afflicted with consumption, and who spitteth upon the granitoid, and lo! a multitude of flies, even to the number of an hundred, have a delightful feast thereof.

Then hiketh the flies to where the venders of food for the people have put their wares upon the wayside to tell the people what wares are for sale. The multitude of flies are delighted at the kindness of the venders of food, for thus are the flies again made full with a portion of the people's food.

The day is now far spent, and even before it is sunset the multitude of flies findeth an old horse that is much grieved with a sore that runneth much corruption, and he hath discharges from his nostrils, and these things furnish sweet morsels for the flies.

It is now time that the flies hunteth their roosting place and forthwith do they seek the abode of man, where the odor of his ham and eggs are pleasing to the nosepiece of the flies.

Perchance they again find their way to the dinner place and again they walketh upon thy sirloin, or taketh a bath in thy cream, or mayhap he tumbleth into thy gravy and becomes sore distressed, or he walketh over the lips of thy helpless sleeping babe, and leaveth his filth and his poison there.

Verily do these things come to pass, and whoso maketh not war upon the house fly, or permitteth him to be in his household, and swatteth him not, is not wise, yea, verily, he is nasty.—*Missouri Bulletin*.

Milk and Meat in the Food Supply.

Recent studies in nutrition have made clearer the importance of the mineral elements and the vitamins in the diet. In a recent report the committee on food and nutrition of the National Research Council discusses this matter, together with the question of the relative efficiency of the milch cow and the beef animal (in the production of milk and meat) in the conservation of proteins, fats, and carbohydrates and in the gathering and preparation of mineral elements and vitamins.

The following is contained in the report of the committee:

It has long been known, but perhaps never sufficiently emphasized, that the milch cow returns in the human food which she yields a very much larger share of the protein and energy of the food she consumes than does the beef animal. Doctor Armsby, probably the leading expert of this country on animal nutrition, has estimated (*Science*, Aug. 17, 1917) that of the energy of grain used in feeding the animal there is recovered for human consumption about 18 per cent in milk and only about 3½ per cent in beef.

In an official report on the food supply of the United Kingdom it is estimated that to produce 100 calories of human food in the form of milk from a good cow required animal food of 2.9 pounds starch equivalent; 100 calories of milk from a poor cow is estimated to require the consumption of 4.7 pounds; while to produce 100 calories of beef from a steer 2½ years old it is estimated that 9 pounds of starch equivalent in feed are required.

Stated in terms comparable with those used by Doctor Armsby, this would mean that the good milch cow returns 20 per cent of the energy value of what she consumes, the poor milch cow 12 per cent, and the good beef steer only 6 per cent. Although this estimate is more favorable to the beef steer than is that of Doctor Armsby, yet even in this estimate it will be seen that the poor cow is twice as efficient and the good milch cow more than three times as efficient as the beef steer in the conservation of energy in the food supply.

Considering the whole length of life of the animal, Professor Wood, the leading English agricultural expert, estimates that the cow returns in milk, veal, and beef one-twelfth as much food as she has consumed, while the beef steer returns only one-sixty-fourth. In other words, the cow is five times as efficient as the beef steer as a food producer when the whole life cycle of the animal is considered. Similarly it has been estimated by Cooper and Spillman (*Farmers' Bulletin*, No. 877, 1917, U. S. Department of Agriculture) that the crops grown on a given area may be expected to yield from four to five times as much protein and energy for human consumption when fed to dairy cows as when used for beef production. As Wood has very strikingly shown, the longer the time that the beef animals are fattened on grain the less economical the process becomes.

Quite recently Doctor Armsby has pointed out (*Yale Review*, January, 1920) that "the dairy cow shows the highest efficiency of any domestic animal, both as regards conversion of food and availability of the product for man."

Not only is the milch cow several times more efficient than the beef steer in the conservation of proteins, fats, and carbohydrates for human consumption, but in the gathering and preparation of mineral elements and vitamins she contrasts even more favorably with the beef animal. It is largely because of its richness in calcium and in fat-soluble vitamins that milk is the most efficient nutritional supplement to bread or other grain products.

Meat is strikingly poor in calcium and does relatively little to balance a diet consisting largely of bread or of other products of seeds. It does, of course, supplement the protein, but American dietaries would nearly always be adequate as regards protein even without the meat that they contain. On the other hand, dietaries containing little or no milk are very apt to be inadequate as regards calcium. Detailed analysis of the results of hundreds of American dietary studies shows that in practice the adequacy of the calcium intake depends more largely on the sufficiency of milk supply than upon any other factor, or, in fact, than upon all other factors combined.

The vitamins furnished by hay and grains, and thus consumed by cattle, are stored in the animals' tissues to only a limited extent, but they are transferred in relative abundance to the milk. Hence the vitamins of the coarse material of grain not directly available as human food are brought into form for man's use very efficiently through milk production and very inefficiently through the production of meat.

Thus, the result of recent studies in nutrition, which have made clearer the importance of the mineral elements and vitamins, is to emphasize strongly the great desirability of a more abundant milk supply, even if this should somewhat reduce the production and consumption of meat. Our present knowledge of nutrition justifies more fully than ever before the statement that "the dietary should be built around bread and milk," bread or other grain products being the foods which furnish the most nutriment for their cost (whether in money or in land and labor), and milk being by far the most efficient nutritional supplement to bread or other grain products. Therefore, somewhat more of our grain crops than is the case at present should come directly into human consumption to augment the bread supply; and of the grain fed to cattle more should be used for the production of milk and less for the production of meat.

In general, 10 pounds of grain may be expected to produce not over 1 pound of meat or about 3 quarts of milk. If the 3 quarts of milk cost the consumer more (because of greater labor cost in production), they are also certainly worth more to him. In so far as things as different in their nutritional properties as meat and milk can be compared, it is fair to say that 1 quart of milk is at least as great an asset in the family dietary as is 1 pound of meat. The per capita consumption of meat in the United States is so high that it might be reduced by one-third or even one-half with little or no nutritional loss, while a corresponding increase in milk consumption would certainly constitute a great improvement in the average American dietary. We are confident that a moderate shifting of emphasis from meat to milk will help in the normal evolution of American agriculture and improve the food economy and public health of the American people. — *Public Health Reports*.

Running for the Train.

Not so long ago a man thinking he would miss the train ran a few squares. He arrived at the station in time, but exhausted. He sat down and in a few moments expired. He was considered a healthy man and very seldom complained.

A clergyman a number of years ago ran for the depot. He came there in time, but before arriving at his destination was a corpse.

A college professor, who supposed himself to be sound, ran for the train, and getting aboard fell exhausted into a seat, was unconscious for nearly an hour, could not breathe naturally the rest of the day, with constant pain in the region of the heart and a weak, irregular pulse for a number of years.

The danger of sudden death in these efforts to catch a train may not be great, and if fatal, would probably not be made known in many instances, while death from accidents or matters not as important would be noticed by the papers generally. The danger is chiefly in regard to those who are either prone to affections of the heart, or who have symptoms of some of the various maladies to which it is subject.

In such cases a single effort of the kind alluded to may prove to be the cause of a most serious affection, and may end in death or greatly increase the trouble that may continue for months or years.

If a record of such cases could be made it would probably be found that the death, or serious injury, so much spoken of and dreaded, would bear but a small proportion to those resulting from the daily efforts to catch the train.

Better miss the train than run the risk of running into the jaws of death, for this strain on the heart cannot prove beneficial to one that is sound, while it most positively will prove more or less disastrous to one that is weak.—*J. Wm. Trabert, M. D., in Medical Summary.*

Keep Sympathetic With the Children.

The growth of antagonism is very insidious and subtle. Usually those who are gradually becoming antagonistic are for a long time unaware of the fact. It is not deliberate and from choice. It is like the insidious oncoming of a hidden malady. It often becomes patent to one's friends before it is realized by one's self.

In the home it sometimes manifests its destructive influence between husband and wife; often between one or both parents and a particular child. It is easy for a parent to fall into a habit of criticising and "nagging" a child. It is a matter of "Why did you put on or not put on this or that garment?" "Why didn't you do so and so?" Or "For pity's sake don't associate with this or that boy or girl." How quickly the child recognizes and reacts against the unsympathetic, critical attitude of the parent! How easily he slips into an attitude of impatience and self-defense!

Then something infinitely precious has been lost to both parent and child—something that it is exceedingly difficult to regain or replace. The heart is like the leaves of the "sensitive plant." A touch may close it,

though ever so light. After many such antagonistic touches it will no longer open the avenues of responsiveness so valued by the parent, so important for the future of the child.

These avenues have been closed to traffic—not deliberately, but none the less really and disastrously. Here is one of the great tragedies of the home.

The same tragedy is of frequent occurrence in the school. We want to warn the teacher of the direful influence and results of antagonism. We want to say, "Keep in sympathy with your pupils at all hazards and at any sacrifice. Make them feel your love and sympathy and understanding of their difficulties and problems. This will mean their redemption and your salvation as a teacher. You will be *the* teacher whom they will always remember and whose influence will abide with them through life.—

Education

The Fly.

I have been taking a good deal of interest in the war on the fly. I hate the fly and would be delighted to see the tribe exterminated. There is this much to be said for the fly: for its size it has more nerve than any other insect or bird. It is absolutely without fear. This may be because it has no sense. The fly will invite death a hundred times in an hour by settling on the bald dome of the dehaired man. The man gets wildly enraged. It is the chief object of his life for the moment to kill the fly. He will strike to kill. The fly will escape by just a hair's breadth and then calmly wipe his face with his front feet and come again. He goes right back into the danger zone without any hesitation. There may be plenty of safe places where he could dine just as well as not, but he prefers to go back to the bald-headed man. A fly would rather nearly starve browsing around over the head of a bald man than to riot in plenty where there is no danger and where he is not bothering anybody in particular. And the final result is that the fly gets what is coming to him. The man lays for the fly until he gets him or her. The fly, for a small thing, is possessed of a curiosity big enough for a Plymouth Rock hen. That is another thing that gets it into trouble. A sheet of sticky fly paper is laid right out in sight of the fly. He can see that a large number of other fool flies have been caught on the paper. If he had any caution or good sense he would say that this was no place for a fly, but instead of that he steps on the paper to see what it was that held the other fly. He finds out. His name is Dennis.

If it wasn't for the curiosity and recklessness of the fly there would be no living in the world. It would be filled up with flies. The death rate among flies is enormous, which is the only thing that prevents the enormous increase of the tribe. An enterprising fly can start in just after breakfast and by supper time have an interesting family of about seventeen hundred children. This sort of thing keeps up the fly population. I have thought for a long time that if flies and mosquitoes could be abolished absolutely it would do a great deal to raise the percentage of real Christianity and brotherly love. No man can really be a good citizen when the flies are feeding on him.—Tom McNeal.

WHAT PEP IS.

Vigor, vitality, vim, and punch—

THAT'S PEP. /

The courage to act on a sudden hunch,

THAT'S PEP.

The nerve to tackle the hardest thing,
With feet that climb and hands that cling,
And a heart that never forgets to sing—

THAT'S PEP.

Sand and grit in a concrete base—

THAT'S PEP.

Friendly smile on an honest face—

THAT'S PEP.

The spirit that helps when another's down,
That knows how to scatter the darkest frown,
That loves its neighbor and loves its town—

THAT'S PEP.

To say "I will," for you know you can—

THAT'S PEP.

To look for the best in every man—

THAT'S PEP.

To meet each thundering knock-out blow,
And come back with a laugh, because you know
You'll get the best of the whole darned show—

THAT'S PEP.

—Pep.

BULLETIN

OF THE

Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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JUNE, 1920.

VOL. XVI.

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The big one always gets away!

Measure or weigh 'em—don't trust to your memory.

Troubles—like babies—grow larger by nursing.

No principle ever suffered because of personal abuse.

Some tombstones would tell the truth about people, if left blank.

When a man has finished his race in this world, he is out of breath.

**The county public-health nurse is an accepted institution because of
public necessity.**

**NOTICE.—Send all specimens for Wasserman or diagnostic laboratory
to the new Public Health Laboratory, Topeka, Kan.**

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.			Measles.	German Measles (rubella).	Whooping Cough.	Chickenspox.	Mumps.	Pneumonia (acute lobar).	Measles (epidemic).	Tuberculosis.	Other Diseases (see Addenda).
THE STATE.....	85	561	74			12	6	356	295	126	38	6	128	117
Allen, except.....	0	0	1	0	1	2	0	0	0	0	0	0	1	0
Iola	0	3	0	0	0	2	0	0	0	0	0	0	0	0
Anderson	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except.....	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Atchison city ..	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Barber	0	0	0	0	0	1	1	4	0	4	0	0	0	0
Barton, except	0	2	0	0	0	1	0	0	0	0	0	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	3	1	0	3	7	0	0	1	0	0	0	0	0
Fort Scott	0	21	0	0	0	20	0	1	1	0	0	1	0	2
Brown	0	2	0	0	1	35	0	0	0	1	1	0	2	0
Butler, except	0	7	1	0	0	6	0	1	0	2	0	0	0	0
Augusta	1	1	0	0	0	2	0	0	0	0	0	0	0	0
El Dorado	3	17	0	0	5	28	0	7	0	2	0	0	7	47
Chase	1	2	0	0	0	18	0	0	0	2	1	0	1	3
Chautauqua	3	0	2	0	1	0	0	0	0	0	0	0	2	0
Cherokee, except.....	0	2	1	0	0	11	0	0	0	0	1	0	1	2
Galena	2	3	0	0	0	34	0	0	0	0	0	0	0	0
Cheyenne	0	2	4	0	1	1	0	0	2	0	0	0	0	1
Clark	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Clay	0	0	1	0	2	3	0	0	0	0	0	0	0	0
Cloud, except	0	0	0	0	2	1	0	0	1	0	0	0	0	1
Concordia	0	4	0	0	0	1	0	0	1	0	0	0	0	0
Coffey	0	0	0	0	7	18	0	0	0	0	0	0	0	0
Comanche	0	3	0	0	0	0	0	1	0	1	0	0	3	0
Cowley, except	0	5	0	0	1	7	0	0	0	0	0	0	0	2
Arkansas City	0	9	0	0	1	3	0	3	9	0	1	0	4	0
Winfield	0	0	3	0	0	25	0	4	0	11	0	0	4	3
Crawford, except.....	0	4	0	0	0	6	0	1	1	0	0	0	1	3
Pittsburg	0	17	0	0	4	9	0	0	2	0	0	0	0	0
Decatur	0	0	0	0	0	10	0	1	0	0	0	0	1	0
Dickinson	0	38	1	0	12	7	0	12	0	0	0	0	3	0
Doniphan	0	4	1	0	1	1	0	0	1	0	0	0	0	0
Douglas, except.....	0	0	0	2	0	1	0	1	2	6	0	0	2	4
Lawrence	0	9	0	0	0	40	0	1	0	10	0	0	0	0
Edwards	0	0	0	0	7	5	0	0	0	0	0	0	0	0
Elk*	0	1	5	0	1	1	0	1	1	0	0	0	0	1
Ellis	4	3	0	0	0	0	0	0	6	1	0	0	0	0
Ellsworth	0	14	0	0										

MORBIDITY REPORT FOR MAY, 1920—Concluded.

	Influenza			Measles			German Measles (rubella)			Whooping Cough			Chickenpox			Mumps			Scarlet Fever			Tuberculosis			Other Diseases (see Addenda)		
Lincoln	1	0	0	0	1	7	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Linn	3	2	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except Emporia	0	11	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	0	0	0	0	1	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marshall	0	5	0	0	2	63	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McPherson	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meade	0	1	0	0	1	5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	0	3	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitchell	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montgomery, except Coffeyville	1	16	0	0	0	18	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Independence	2	1	3	0	5	18	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Morris	1	5	1	0	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morton	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neosho, except Chanute	0	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	0	0	8	10	0	0	0	11	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
Norton	0	1	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage	0	2	0	0	0	22	0	0	0	0	0	1	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Osborne	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee	2	12	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips	0	13	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pottawatomie	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pratt	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Rawlins	0	0	3	0	4	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except Hutchinson	1	0	3	0	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Republic	1	1	0	0	3	45	0	0	0	10	19	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Rice	0	14	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riley, except Manhattan	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	0	0	0	27	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush	0	8	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except Salina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina	1	1	1	4	3	26	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scott	0	2	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except Wichita	0	7	0	0	3	6	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seward	1	62	3	0	4	46	0	0	0	11	22	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except Topeka	0	0	0	0	2	4	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shawnee	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheridan	0	23	1	0	5	180	1	142	104	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sherman	0	0	0	0	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sherman	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith	1	17	2	0	0	4	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stafford	0	0	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except Wellington	4	8	4	0	3	12	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington	0	8	0	0	0	0	0	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	0	5	0	0	3	30	0	0	5	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodson	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except Kansas City	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City	0	14	6	0	15	172	0	0	43	17	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rosedale	0	2	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 13; chancre, 3; erysipelas, 6; gonorrhea, 184; lethargic encephalitis, 1; ophthalmia neonatorum, 2; pellagra, 1; syphilis, 141; trachoma, 8.

Opportunities for Indirect Sex Education Through English Literature.

By MINNIE J. OLIVERSON, Kansas City, Kan., High School.

Reflecting upon the four-fold plan, or manifold plan perhaps it is now, of the government bureau for sex education, one grants the appropriateness of enlisting the department of physical education, where expert men and women meet, in separate classes, youths and maidens of nearly uniform age, where lectures, charts, tests, dress, teamwork and a hundred other incidents of general physical education create a natural environment out of which specific vital instruction may grow. It seems natural to say, "Why, that is the place for it," but the department of biology, including zoölogy, botany and physiology, offers a sequence of opportunity for clear-cut, scientific presentation of the facts of human sex and reproduction. To one rather indifferently informed upon the scope of high-school civics, it seems safe to ask a wise teacher there to contribute his service to the government plan of conserving this generation and training it, perhaps, to teach and improve the next. Finally, blind as the alley looks and unpaved the way, it is natural to turn to the department of English literature, a department blamed for many of the ills of modern education, solicited in every special improvement campaign and responsive to each appeal, if response is in its power, and this, because it is a department in which students spend at least three years, acquire their susceptibility to printed message and crystallize many of their higher ideals of conduct.

Every English teacher with whom I have had a chance to talk utters the characteristic moan, "Oh, let English literature alone" or "I should not consider myself competent to contribute anything," but in the next instant, most of them begin to cite some indirect contribution to a cause to which each is more or less convincingly alive. Teachers of English classics are too often embarrassed by evidences of unwholesome sophistication on the part of high-school students not to wish for wholesome dissemination of truth, that will make passages referring to sex keep their relative place upon the page and not assume monstrous proportions. These coworkers agree with the librarian and with my thoughtful Jewish senior that the proper place for instruction is in the American home, in the hands of the much-maligned American parent, but if, according to Doctor Vincent's whimsical announcement, this nation will never be a nation of happy homes until it makes love by reason, rears children by calculation, and politics spells patriotism, I am almost sure that the department of English will indirectly do its share to maintain mental poise and right spiritual attitude in a student body receiving critical, scientific instruction elsewhere.

I should like, in passing, to indulge in tribute to those parents among my friends who, I think, fulfill their obligation in this regard: a Massachusetts mother of two boys, taught as carefully as if they had been daughters, feeling herself assured when they came home from high school with stories they knew she would hardly believe, quite sure of them

the first clinic, which indeed is a very good showing. One doctor brought a patient 60 miles to be examined.

At Eureka we had all the doctors interested and were able to examine something like thirteen patients. We found public-health interest at low ebb, however, in that vicinity, as the people were of the opinion that tuberculosis did not exist in Greenwood county. We found, however, seven in the city of Eureka—one of them a teacher in the public schools; another one, a well-advanced case of tuberculosis, taking care of a pop-corn stand.

A public meeting was advertised well at the church and was addressed by Doctor Cox and myself, but was very poorly attended. Thirty-one came out, which is about one per cent of the population. At the same time Dubinskie's Stock Company was playing to a crowded tent at 50 cents per ticket, plus war tax. We, however, got a very fine write-up of the meeting in the paper, and I believe with a little effort that much good can be accomplished in this county. At any rate, there is a very fertile field. At the first meeting in Wellington we got away very well, examining thirteen people.

Upon my return to this town on the 8th of June, I found them very, very enthusiastic, with fully 50 per cent of the doctors in the county in attendance. We examined thirty-two that day, three or four being arrested cases, who came in to find out the status of their case. In two or three instances I examined unsuspected cases that lived in families with tuberculosis people. This one point to me is of importance, because we are gradually getting it across, that the signs of early tuberculosis are very, very faint, and that the signs of early tuberculosis should be

~~discouraging succession of countless others of inferior type.~~
second day, another girl came up to talk, accompanied by a friend from a different class, who expressed her approval of Browning. "What do you know of it, Henrietta? Have you read it?" "No, but the girls told me about it."

I should not forgive myself for the experiment with the pitiful tragedy and my dear class if the play had not been the most beautiful, most sympathetic, searching treatment of a tragedy of untaught youth and if I could not have restored the class, as I believe I did, at the conclusion. I remembered so well the first time I heard it read. People applauded in the conventional way and rattled seats, as usual, while they were leaving, when I thought the silence one maintains during the benediction would have been more fitting. And then, I could hear a white-haired mother's repetition of Mildred's lament.

"I was so young, I loved him so, I had no mother. God forgot me, and I fell."

I must admit I have groped for light among the classics we teach and have blundered unpardonably in trying to reveal an attitude not very clearly taken, but, in my final effort to make myself clear, I dare quote a mathematics friend and stop:

"As to the sex hygiene and literature, I'm inclined to wonder if some home readings to follow up *Scarlet Letter*, *Adam Bede*, *Romola*, etc., etc., wouldn't help. Why not have them be clear, quiet, scientific putting of facts, not morals? Why not recommend "*Damaged Goods*" and the half-dozen picture plays worked out by the government for the instruction of the men in the army? I feel more keenly all the time that a moral without a scientific basis back of it is a pretty shaky reed to trust to. Anything which puts the facts as clearly, simply and relentlessly, without emotional appeal, as can be done—in such quiet, sane way as to leave the youngster thinking, not feeling, is what I'd like."

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Reflecting upon the four-fold plan, or manifold plan perhaps it is now, of the government bureau for sex education, one grants the appropriateness of enlisting the department of physical education, where expert men and women meet, in separate classes, youths and maidens of nearly uniform age, where lectures, charts, tests, dress, teamwork and a hundred other incidents of general physical education create a natural environment out of which specific vital instruction may grow. It seems natural to say, "Why, that is the place for it," but the department of biology, including zoölogy, botany and physiology, offers a sequence of opportunity for clear-cut, scientific presentation of the facts of human sex and reproduction. To one rather indifferently informed upon the scope of high-school civics, it seems safe to ask a wise teacher there to contribute his service to the government plan of conserving this generation and training it, perhaps, to teach and improve the next. Finally, blind as the alley looks and unpaved the way, it is natural to turn to the department of English literature, a department blamed for many

The New Health Clinics.

The new public-health movement includes not only the detection and prevention of disease, but what is of equal or more importance, a movement for the promotion of health. In order that this movement may be registered in terms of experience and accomplishment rather than in academic discussion, an effort has been made to establish health clinics at suitable places throughout the state. Accordingly, the State Tuberculosis Association, coöperating with the State Board of Health, local boards of health and county and Red Cross public-health nurses, have established several such health clinics in the state.

The success of this movement is, perhaps, best expressed in a letter received from Dr. C. S. Kenney, superintendent of the State Tuberculosis Sanatorium, who was secured by the State Tuberculosis Association as an expert to detect early cases of pulmonary tuberculosis. Doctor Kenney's interesting letter follows:

NORTON, KAN., June 19, 1920.

My Dear Doctor Crumbine:

I am very glad to report to you that we have been very successful so far with the clinics held at Herington, Eureka and Wellington under the auspices of the State Tuberculosis Association. I believe it is possible to establish ten or twelve permanent clinics throughout the state, as there seems to be a great deal of interest shown in these three cities.

I had some misgivings, of course, at Herington the first time, but with the aid of Dr. W. W. Duke and yourself, we were able to put over a very good clinic, and I was very agreeably surprised upon my return on June 7 to find the enthusiasm unabated and well supported by every doctor in Herington, together with the health officer.

We examined twelve or thirteen cases and at least two will be admitted to the sanatorium from that place, together with one sent after

the first clinic, which indeed is a very good showing. One doctor brought a patient 60 miles to be examined.

At Eureka we had all the doctors interested and were able to examine something like thirteen patients. We found public-health interest at low ebb, however, in that vicinity, as the people were of the opinion that tuberculosis did not exist in Greenwood county. We found, however, seven in the city of Eureka—one of them a teacher in the public schools; another one, a well-advanced case of tuberculosis, taking care of a pop-corn stand.

A public meeting was advertised well at the church and was addressed by Doctor Cox and myself, but was very poorly attended. Thirty-one came out, which is about one per cent of the population. At the same time Dubinskie's Stock Company was playing to a crowded tent at 50 cents per ticket, plus war tax. We, however, got a very fine write-up of the meeting in the paper, and I believe with a little effort that much good can be accomplished in this county. At any rate, there is a very fertile field. At the first meeting in Wellington we got away very well, examining thirteen people.

Upon my return to this town on the 8th of June, I found them very, very enthusiastic, with fully 50 per cent of the doctors in the county in attendance. We examined thirty-two that day, three or four being arrested cases, who came in to find out the status of their case. In two or three instances I examined unsuspected cases that lived in families with tuberculosis people. This one point to me is of importance, because we are gradually getting it across, that the signs of early tuberculosis are very, very few indeed, consequently repeated examinations should be made of every one in contact with tuberculosis subjects.

I was also very much pleased to find that ex-patients from the sanatorium are missionaries in the field and are pounding it home in their respective towns. They all seem to be insistent upon having the examination made early and proper treatment instituted *while there is yet time*.

During the evening a banquet was given by the wives of the Wellington physicians and I had another opportunity to address them upon the early diagnosis and treatment of tuberculosis.

I regret very much to say, however, that a large per cent of the doctors over the state are loathe to pronounce a given case tuberculosis until the signs are marked. Many of them are of the opinion that you cannot make a diagnosis unless the bacilli are present. In the majority of cases, the treatment prescribed is "a change of climate."

I was asked in both Herington and Wellington to return in September, and I was especially requested at Wellington to hold all of the cases examined until the end of the clinic and then give them a talk on tuberculosis and suggest how best to care for the individual case. This, I believe, to be a wise thing to do. I feel, therefore, very much encouraged in this work, and regret my inability to do more of it, but I am "snowed under" at the sanatorium at all times. It is really quite an effort for me to be away for two or three days at a time. We will get two or three cases from Wellington as a result of this clinic.

With kindest personal regards, I am,

Yours very respectfully,

C. S. KENNEY, M. D., *Superintendent*.

P. S.—Found one teacher in Sumner county and several school children tuberculous.

New Treatment for Leprosy Apparently Successful.

The United States Public Health Service has reports of what appears to be a cure for leprosy, it was announced by Surgeon General Hugh S. Cumming yesterday.

Thus one of the world's most dreaded maladies, regarded as a hopeless and incurable scourge of humanity since early history, would seem to have been conquered by officers of the Public Health Service in the leper colony in the Hawaiian Islands.

For some years the belief has been gaining ground that leprosy could be cured, and encouraging progress was made by several investigators. The starting point for this study was the observation that now and then the course of the disease appeared to be favorably influenced by treatment with chaulmoogra oil. The treatment, however, was attended with many difficulties and could not be carried out in all cases. At this point the Public Health Service enlisted the coöperation of Prof. L. E. Dean, head of the chemical department of the College of Hawaii, and president of that institution, suggesting that attempts be made either to isolate the active constituent of this drug, or to devise means of making its continued administration feasible. The latter has been accomplished by preparing what is known as an "ethyl ester" from the chaulmoogra oil. The treatment has been carried on at the Leprosy investigation station at Kalihi, Hawaii, the work being directed by Dr. J. T. McDonald, director of the station. The results of the treatment thus far have been so satisfactory that lepers come willingly for treatment, a recent inspection by Hawaiian health authorities failing to disclose a single secreted case of leprosy. Following a course of treatment, extending over about a year, 48 lepers, treated according to the new method, were paroled in October, 1919. Up to now they have remained free from disease. At the present time the treatment has been administered only at the receiving station, but it is hoped to provide facilities for the treating also of lepers in the leper colony at Molokai.

Surgeon General Cumming's announcement relates to lepers who have been treated by the new method and have been under observation for a considerable period. Moreover, the decision as to apparent cure has, in the case of each patient, been officially determined, not by officers of the Public Health Service, but by a special parole board, which alone has authority to discharge a patient from custody.

Food Analysis LXIX, for March and April, 1920.

E. H. S. BAILEY, *Director.* W. S. LONG, *Chemist in Charge.*

OFFICIAL SAMPLES.

MILK.

50285. Milk. H. L. Strouble and Frank Battersey, Salina, Kan. Retailer, J. Massey. Salina, Kan. Fat, 4%. Passed.
 50286. Milk. H. L. Strouble and Frank Battersey, Salina, Kan. Retailer, J. Massey. Salina, Kan. Fat, 3.6%. Passed.
 50287. Milk. Retailer, Belle Springs Creamery Co., Salina, Kan. Fat, 3.6%. Passed.
 50288. Milk. Retailer, Belle Springs Creamery Co., Salina, Kan. Fat, 3.8%. Passed.

50289. Cream. Retailer, Belle Springs Creamery Co., Salina, Kan. Fat, 37.5%. Passed.
 50290. Milk. Retailer, A. H. Beineke, Salina, Kan. Fat, 3.2%. Passed.
 50291. Milk. Producer, John Magee. Retailer, James Shamburg, Salina, Kan. Fat, 3.8%. Passed.
 50292. Milk. Retailer, James Shamburg, Salina, Kan. Fat, 3.4%. Passed.
 50293. Milk. Retailer, Silver Springs Creamery Co., Salina, Kan. Fat, 3.8%. Passed.
 50294. Milk. Retailer, Silver Springs Creamery Co., Salina, Kan. Fat, 3.9%. Passed.
 50295. Cream. Retailer, Belle Springs Creamery Co., Salina, Kan. Fat, 27%. Passed.
 50296. Milk. Retailer, A. H. Garinger, Salina, Kan. Fat, 3.8%. Passed.
 50297. Milk. Retailer, A. H. Garinger, Salina, Kan. Fat, 3.7%. Passed.
 50298. Milk. Retailer, E. J. Lockwood, Salina, Kan. Fat, 3.8%. Passed.
 50299. Milk. Retailer, E. J. Lockwood, Salina, Kan. Fat, 3.8%. Passed.
 50300. Cream. Retailer, E. J. Lockwood, Salina, Kan. Fat, 30.5%. Passed.

BEVERAGES.

22792. Beverage. Santa Fe unclaimed freight. Alcohol, 10.5%.
 22793. Beverage. Santa Fe unclaimed freight. Alcohol, .8%.
 22794. Beverage. Santa Fe unclaimed freight. Alcohol, 5.33%.
 22795. Beverage. Santa Fe unclaimed freight. Alcohol, 4.66%.
 22796. Beverage. Santa Fe unclaimed freight. Alcohol, 4%.
 22797. Beverage. Santa Fe unclaimed freight. Alcohol, .70%.
 22798. Beverage. Santa Fe unclaimed freight. Alcohol, .60%.
 22799. Beverage. Santa Fe unclaimed freight. Alcohol, .80%.
 22800. Beverage. Santa Fe unclaimed freight. Alcohol, 2.88%.
 22801. Beverage. Santa Fe unclaimed freight. Alcohol, 5.88%.
 72086. Grape pop. Hekelkaemper Bros., Atchison, Kan. Retailer, same. Cudbear present. Not labeled "Artificial Color." Illegal.
 72087. Sarsaparilla pop. Hekelkaemper Bros., Atchison, Kan. Retailer, same. Passed.

MISCELLANEOUS.

20805. Hominy. Cereal Food Company, Peoria, Ill. Retailer, Fleming Wilson, Topeka, Kan. Passed.
 22780. Corn. Altoona Canning Co., Altoona, Kan. Retailer, Sentney Grocery Co., Hutchinson, Kan. Passed.
 22789. Baking powder. Royal Baking Powder Co., of New Jersey. Available CO₂, 13.4%. Passed.
 72081. Dehydrated beans. Wittenberg-King Co., Portland, Ore. Retailer, J. A. Barker, Smith Center, Kan. Passed.
 72084. Ripe olives. H. J. Heinz Co., Pittsburg, Kan. Retailer, C. F. Hobbs, Lawrence, Kan. Passed.
 93319. Egg Saver. (Portion of label, "Use instead of 36 Eggs.") Starch-bearing material over 50%. Illegal.
 266. Milk. Retailer, College Hill Milk Depot, Topeka, Kan. No preservatives detected.
 267. Milk. Retailer, W. Parr, Topeka, Kan. No preservatives detected.
 268. Milk. Retailer, College Hill Milk Depot, Topeka, Kan. Sodium bicarbonate present. Illegal.
 257. Baking powder. Rumford Chemical Works, Providence, R. I. Retailer, J. F. Roose, Topeka, Kan.
 262. Honey. S. A. Fuller, Helena, Ark. Passed.
 265. Cleaning powder. Sodium bicarbonate and sodium carbonate present.
 269. Hominy. Theo. Poehler Mercantile Co., Topeka, Kan. Retailer, Owl Grocery, Topeka, Kan. Passed.
 1243. Wheat bran. Sent in by John F. Oborny. No poison detected. Passed.
 1244. Vinegar. Retailer, California Fruit and Grocery Co., Augusta, Kan. Contains added dilute acetic acid. Illegal.
 1245. Lard. Retailer, California Fruit and Grocery Co., Augusta, Kan. Contains cotton-seed oil. Illegal.
 1254. Honey. C. A. Marksbury, Coffeyville, Kan. Passed.

Drug Analysis LXII.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist;
 G. N. WATSON, Analyst.

The present report contains the usual series of compounds and preparations. Some of these are of unusual character. One interesting feature with regard to the present report is that which relates to the milk of magnesia. It is evident that if this preparation (magma magnesia) is made by the formula of the U. S. P. there is no likelihood of sulphates being present; even a trace of it would be unlikely to be found, inasmuch as the present U. S. P. formula is made from magnesium carbonate and

sodium hydroxide. If made, however, by the old formula, namely, from magnesium sulphate and sodium hydroxide, the sulphates would appear in the supernatant fluid and the magma which is deposited will be difficult to wash thoroughly enough to remove all traces of sulphate. While there is no objection to the presence of sulphates in the preparation, traces of sulphates would indicate that the magma had been made by the old formula and not thoroughly washed. On the other hand, if the sulphates are absent, one could not tell whether it was made from the new or the old formula, since the old formula, if the sulphates are absolutely removed by washing, would furnish practically the same preparation as that of the new. It may be said that there are some houses who have made a special point of distributing in the state of Kansas the magma magnesia made by the new U. S. P. formula only. The official standard for this preparation requires that there shall be not less than 6.5 per cent nor more than 7.5 per cent of the weight of magnesia magma taken, $\text{Mg}(\text{OH})_2$. It will be noted that one of these products reported contained an excess of magnesium hydroxide and another a deficiency of the same.

The demand for this preparation has grown considerably. Its popularity seems to be, as an antacid, superior to that of the alkaline carbonates or bicarbonates so frequently used, and it seems to operate favorably in sick stomach attended with acidity and, as such an antacid, has advantage over sodium carbonate or bicarbonate, being less irritating and neutralizing a larger proportion of acid. Incidentally it may be remarked that the writer has found a scarcity of this preparation in the eastern market, the explanation for this being given as due to shortage of proper containers for it.—L. E. S.

MILK OF MAGNESIA.

- Lab. No. 7615, Insp. No. 50302. Pool Drug Co., Manhattan. Brand, Phillips. Contained 9.64% magnesium hydroxide. Sulphate, trace.
- Lab. No. 7616, Insp. No. 50303. Pool Drug Co., Manhattan. Brand, P. D. and Co. Contained 6.61% magnesium hydroxide. Sulphates, none.
- Lab. No. 7617, Insp. No. 50304. A. H. King, Manhattan. Brand, A. D. S. Contained 6.92% magnesium hydroxide. Sulphates, present.
- Lab. No. 7618, Insp. No. 50304. Brand, McK. and R. Contained 6.74% magnesium hydroxide. Sulphates, trace.
- Lab. No. 7619, Insp. No. 50306. Palace Drug Co., Manhattan. Brand, S. & D. Contained 8.14% magnesium hydroxide. Sulphate, trace.
- Lab. No. 7620, Insp. No. 50309. L. H. Combs, Manhattan. Brand, Rexall. Contained 6.35% magnesium hydroxide. Sulphates, trace.
- Lab. No. 7621, Insp. No. 50310. L. H. Combs, Manhattan. Brand, Riker Laboratories, Inc. Contained 6.63% magnesium hydroxide. Sulphates, trace.
- Lab. No. 7622, Insp. No. 50311. L. H. Combs, Manhattan. Brand, Meyer Bro. Drug Co. Contained 4.1% magnesium hydroxide. Sulphates, considerable.
- Lab. No. 7623, Insp. No. 50312. O. A. Clewell, Junction City. Brand, Salko. Contained 6.26% magnesium hydroxide. Sulphates, trace.
- Lab. No. 7624, Insp. No. 5313. F. P. Kibbey, Junction City. Brand, Nyal. Contained 6.63% magnesium hydroxide. Sulphates, none.
- Lab. No. 7625, Insp. No. 50323. Brand, John T. Millikin and Co. Contained 6.72% magnesium hydroxide. Sulphates, none.
- Lab. No. 7626, Insp. No. 50328. Davenport and Clark, retailer, Little River. Brand, W. S. Merrill and Co. Contained 7.07% magnesium hydroxide. Sulphates, considerable.
- Lab. No. 7627, Insp. No. 22818. Brand, Mulford. Contained 6.04% magnesium hydroxide. Sulphates, none.

POWDERED ASPIRIN.

- Lab. No. 7547, Insp. No. 50236. O. W. Rankin, Wakefield, retailer. Brand, Heyden. M. P. 128° C. No salicylic acid. Passed.
- Lab. No. 7554, Insp. No. 50239. Hall Drug Co., Lincoln. Brand, Merck. M. P., 127° C. No salicylic acid. Passed.

- Lab. No. 7556, Insp. No. 50241. Frank Pedroja, Lincoln. Brand, Mallinckrodt. M. P., 127° C. No salicylic acid. Passed.
 Lab. No. 7562, Insp. No. 50247. H. C. Low, Salina. Brand, McK. and R. M. P., 128.5° C. No salicylic acid. Passed.
 Lab. No. 7563, Insp. No. 50248. Henry & Stevens, Kanopolis. Brand, Smith, Kline & French. M. P., 128° C. No salicylic acid. Passed.

ASPIRIN TABLETS.

- Lab. No. 7582, Insp. No. 50271. C. W. Scofield, Lebo. Contained 5.1 grains. Passed.
 Lab. No. 7602, Insp. No. 5075. Agent, Upjohn Co., Kansas City. Contained 5 grains. Disintegrated very slowly.

LINSEED OIL.*

- Lab. No. 7552, Insp. No. 50237. Pure Raw Linseed Oil. Leidigh & Havens Lumber Co., Culver. Specific gravity, 0.927. Saponification value, 189.86. Passed.
 Lab. No. 7553, Insp. No. 50239. Pure Raw Linseed Oil. Halsey & Austin, Culver. Specific gravity, 0.928. Saponification value, 187.84. Passed.
 Lab. No. 7596, Insp. No. 72083. Com. Linseed Oil. Jehlip Pharmacy, Cuba. Specific gravity, 0.887; iodine value, 78.49; saponification value, 84.46.

ALCOHOL.†

- Lab. No. 7600, Insp. No. 22783. Layton & Neilson, Concordia. Contained 28% added water. Sample sent in by Layton & Neilson.
 Lab. No. 7603, Insp. No. 50301. J. S. Chism Drug Co., Wichita. Contained 94.95% absolute alcohol by volume. Passed.
 Lab. No. 7604, Insp. No. 81278. Andrews Drug Co., Wichita. Contained 94.6% absolute alcohol by volume. Passed.
 Lab. No. 7611, Insp. No. 93366. Frazier Drug Co., Wichita. Contained 94.95% absolute alcohol by volume. Passed.
 Lab. No. 7612, Insp. No. 93367. Dockum Drug Co., Wichita. Contained 94.3% absolute alcohol by volume.
 Lab. No. 7613, Insp. No. 93368. Tilford Drug Co., Wichita. Contained 94.6 absolute alcohol by volume.

MISCELLANEOUS.

- Lab. No. 7522, Insp. No. 50210. Chinese Blistering Flies. Ed Quenelle, Aurora. Examined microscopically. No foreign substance detected. Passed.
 Lab. No. 7595, Insp. No. 50284. Essence of peppermint. Layton & Neilson, Concordia. Contained 8.8% oil and 20% added water. Adulterated.
 Lab. No. 7579, Insp. No. 22781. Extract of vanilla for alcohol content. Contained 31.22% absolute alcohol by volume.
 Lab. No. 7599, Insp. No. 72085. Spirit of camphor. Johnson Bros., Sabetha. Contained 9.04 gm. camphor per 100 mls. Contained considerable sediment. Substandard.
 Lab. No. 7601, Insp. No. 22784. Oil of peppermint. Layton & Neilson, Concordia. Submitted by Layton & Neilson. Passed.
 Lab. No. 9606, Insp. No. 81280. Oil of peppermint. College Hill Drug Co., Wichita. Optical rotation —23°. Soluble in 2½ cc. 70% alcohol. Passed.
 Lab. No. 7607, Insp. No. 81251. Oil of wintergreen. Cookson Drug Co., Wichita. Contained 97.5% methyl salicylate. Passed.
 Lab. No. 7608, Insp. No. 81282. Oil Cedar Wood. Cookson Drug Co., Wichita. Soluble in 16 parts alcohol. Refractive index at 25° C., 1.501; polarization, —33.1. Passed.
 Lab. No. 7609, Insp. No. 81283. Oil of peppermint. Cookson Drug Co., Wichita. Soluble in equal part 80% alcohol. Polarization —28.65. Passed.
 Lab. No. 7609½, Insp. No. 22804. Biscuit. Examined for poison. Strychnine detected.
 Lab. No. 7614, Insp. No. 72088. "Aspirenol." Contained sodium salicylate, saccharin, cascara and menthol.
 Lab. No. 7593, Insp. No. 72080. "Partola." Pauly Pharmacy, Logan. Contained phenolphthalein. Flavored with oil of peppermint.
 Lab. No. 7598, Insp. No. 22782. "Lyko." Contained 22.12% alcohol by volume. Contained phenolphthalein and ginger.

* Linseed oil should conform to the standard as set forth in house bill No. 184, Laws of 1911.

† Alcohol should contain not less than 94.9% absolute alcohol by volume.

OUR NEW CONSOLIDATED LABORATORIES.

Through the courtesy of Washburn College and the International Health Board, it has been possible to consolidate the Diagnostic and Wasserman Laboratories at Topeka in rooms provided by the College.

The personnel of five will be under the supervision of the new director, Dr. Kenneth F. Maxey, of Johns Hopkins University, Baltimore, Md.

After July 1 all blood and diagnostic specimens should be addressed to the new

**Public Health Laboratory,
Topeka, Kansas.**

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